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THE MALIAN FOOD SECTOR STRATEGY:

A REVIEW AND EVALUATION OF ITS
CONTENTS IN RELATION TO THE USAID
DEVELOPMENT PROGRAM IN MALI

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PREFACE

The first section of the attached report was translated by the consultant from the document La Strategie Alimentaire du Mali produced by the Comité Interétats de Lutte contre la Sécheresse au Sahel (CILSS) and the Club du Sahel in August 1982 as an official abridgement of the longer document Elaboration de la Strategie Alimentaire: Commission d'elaboration de la stratégie alimentaire CESA produced by the Ministry of Agriculture of the Republic of Mali and the CILSS/Club du Sahel in July 1982. The key points in the abridgement were constantly checked against the longer document and of course both were read several times in their entirety. Any questions as to particular points of interest or confusion in this report should be referred to the longer document of clarification.

I. THE MALIAN FOOD SECTOR STRATEGY AS PRESENTED TO DATE

A. Introduction

The concept of a food sector strategy for Mali grew out of discussions between the Malian Government and the World Food Council. The objective of these discussions was to consider the proper place for questions of food security in the process of national economic development planning. It was decided that the development of a food sector strategy represented an integrated and operational approach to the problem of linking overall food production and improved nutritional considerations more closely with specific national economic planning strategies and policies.

The goal of any food sector strategy is to assure an adequate level of food security for the population in question. In some cases, governments can achieve this end simply by creating an appropriate economic climate for the activities of the principal economic actors in the food supply chain: farmers, food processors, marketing agents, transporters, and consumers. In other cases, lack of natural resources, adverse climatic conditions, geographic size, and other factors affect the problem of food security more profoundly and necessitate a more intense effort in national planning. This is thought to be the case in Mali.

Although many factors in the development of Mali are recognized to be outside the control of government, many others are seen to be within the legitimate domain of government action. It is thought, for example, that government in Mali has a legitimate responsibility - in the context of a food sector strategy - to devise means to:

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1. reduce waste and economic inefficiency;
2. eliminate bottlenecks to development;
3. increase the value of physical and human capital;
4. stimulate and regulate domestic economic forces; and
5. secure development assistance from external sources.

In these aspects, the food sector strategy is viewed as a process, in which the participants are charged with the determination of the best - or, alternatively, the least bad - way to attain the central objective of food security within a given time period. In the Malian situation, the time period chosen for the planning horizon is 1980 to 2000. It is expected that the attainment of the central objective will require the active participation of all the "socio-economic actors involved in the country's food system".

In the development of the food sector strategy, attention is brought to bear on a number of restraints to attainment of food security. These restraints are examined both in their own right and with regard to their reciprocal interactions one upon the other. Three general categories of restraints are examined:

1. development "contradictions" which must be resolved either by compromise or by picking one alternative over another;
2. development constraints and bottlenecks which need to be either reduced or eliminated; and
3. lack of effective linkages which induce multiplier effects in development, where the latter are seen as the "real motors of development".

3.

In articulating a food sector strategy, it is recognized that the "whole strategy is of value only to the extent that the stated strategic objectives are translated into operational targets and programs of action which contribute to the attainment of these objectives". Finally, the provision of continuous oversight by government during the implementation of the food sector strategy is seen as the last stage of the process. Such surveillance is to provide the basis for necessary corrective measures at any point in the implementation process and is to assure that strategic objectives are in fact being attained through the programs put in place.

In global terms, then, the food sector strategy process is seen by the Malians as a concentrated attempt to take the necessary actions to plan and manage their future food situation so as not to let future food security issues be dominated exclusively by current events. The development and implementation of the strategy is recognized to involve institutional changes and present new choices vis-a-vis future investments.

B. The Seven Central Objectives of the Strategy; Chapter I

According to the strategy as presented, the Malian food security is to be considered achieved when two objectives are simultaneously attained. The two objectives are labelled "food self-sufficiency" and "nutritional level". Food self-sufficiency is defined as the capacity of a country to provide the "population in general, and each individual and each family in particular, with sufficient food". This food self-sufficiency cannot be said to be real, according to the Malians, until the country

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attains it solely through domestic production of food from the best possible utilization of its agricultural potential and the mobilization of its human resource potential.

According to the strategy, food self-sufficiency in Mali can only be viewed as partial at present for two reasons:

1. the overall food level is believed to be below international norms, as expressed in kilograms of cereal, on average in Mali and certain categories of the population are particularly disadvantaged; and
2. the overall coverage of food requirements from domestic production is less than 100 percent.

After food self-sufficiency, the attainment of a nutritionally adequate diet for each Malian is a fundamental objective of the strategy. This objective is qualitative in nature as yet but recognizes the nutritionists' viewpoint that a balanced diet for each Malian is as important as simply providing the minimum quantity of food, expressed in caloric or kilograms of cereal terms, to permit mere survival.

While admitting to reticence on the part of some to including nutritional targets and balanced diet objectives in the strategy, the document states that "it would not be proper to elaborate a food sector strategy for the next ten or twenty years and ignore the scientific importance of the nutritionists' viewpoint". However, it is suggested that the real value of this objective is in its potential applicability to the question of diversification of food production and not solely to finding an optimal balanced diet per se for each Malian. Taking nutritional considerations

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into account, furthermore, is thought to facilitate solutions to problems of feeding the most disadvantaged segments of the population and in relating different modes of diet in different ecological zones to the specific resource base present.

In summarizing these two objectives, the statement is made that the fundamental goals are "to produce the greatest possible amounts of food to become independent and to diversify food production so as to provide a balanced diet to the population ...".

The third major objective of the strategy is "to provide the population an adequate balanced diet at the least cost". In this regard, the economic argument, often raised by some technicians, that Mali should consider raising more cash crops for export and buy in cheap food grains in exchange on the world market is specifically rejected as a basis for the strategy. The major argument for rejection seems to be that one cannot guarantee a least cost solution to food security by this means, presumably due to fluctuations in world prices, although no specific justification for this stance is presented.

The third objective of least cost production is acknowledged by the strategy to directly concern only about 15 percent of the population since the other 85 percent derive their food directly from on-farm, non-commercial production and consumption and are alleged not to be affected by retail prices. However, supplying the 15 percent of the population is deemed sufficient reason to be concerned by and not neglect cost economies in the marketing chain between the farm and the urban consumer.

6.

The examination of costs at each stage of food marketing and their reduction is stated to be an important element of the strategy. This examination is said to be taking place in conjunction with the government's moves to liberalize the cereal market and OPAM's track record of excessive costs. The strategy and the government's liberalization policy are heavily dependent on private merchants' abilities to cut prevailing marketing costs. Furthermore, what is now being done with regard to cereal marketing is also envisioned as necessary with regard to food-related transport, storage and processing operations.

The strategy raises a fundamental question with regard to cost reductions as to whether past modes of food processing are appropriate for the future. Specifically, the cost efficiency of government-sponsored industrial processing units for food products is questioned in view of past difficulties in supplying necessary raw materials to these plants and in plant management. The possibility of greater efficiencies from smaller-scale, artisanal-type units, based on more appropriate technologies and new and renewable energy sources and located closer to producing areas is raised as an alternative.

The possibility of reducing costs with regard to agricultural production activities is also raised and four areas for government cost reductions are listed:

1. input subsidies;
2. high recurrent costs;
3. fixed output prices and urban consumer subsidies;
4. bottlenecks in production which result in excessive costs.

7.

In order for the food sector strategy to be "long-lived, solid, dynamic and adaptable", it is deemed necessary that it simultaneously address objectives in four related areas: agricultural incomes policy, rural savings, balance of trade, and improvement of state finances.

With regard to agricultural incomes, it is stated that what must be addressed are measures aimed at assuring adequate returns on farmer investments such that costs are fully covered and cash surpluses are generated. It is also deemed necessary to maintain appropriate price relationships between the major food and cash crops grown in Mali so as to avoid the rapid shifts in production that have occurred in the recent past. The agricultural incomes policy itself has three main objectives:

1. to reinforce the farmer's rôle as a commercial food producer;
2. to stabilize active farming populations in productive rural areas and thereby reduce urban drift;
3. to improve living conditions in rural areas.

Along the same lines, the strategy puts forward the idea that development methodologies utilized in the past by the regional Operations will probably have to be revised particularly at:

1. the farm level to take into account that any farming operation should be seen as a mix of different but interrelated enterprises and activities and not a single enterprise unit; and
2. the level of agricultural producer groups who are now to be more responsible for their own development activities.

While it is expected that most of any rural savings generated in the near-term either will be used for increased farm family capital goods consumption or on-farm improvements, the strategy envisions the need to develop means to generate more rural savings over the long-term and channel such savings into more productive development activities. These savings are thereby expected to benefit the whole Maltese community and to bring farmers more into the commercial economy through investment and interest earnings.

With regard to the question of external trade balances, the strategy seems to accept that the decisions taken to promote increased food production will obviously affect production of cash export crops - e.g. cotton - and that these effects will have to be closely studied to avoid serious balance of trade problems.

Likewise, the effects of any proposed strategy on state finances must be studied and alternative policies and investments must be weighed carefully in the future. All proposed investments, recurrent costs, normal operating expenses, and subsidies must be compared with their expected generations of revenue and with the projected availabilities of domestic and external development funds.

C. The Principles of Action Governing the Food Sector Strategy Chapter II

In a country where agricultural production and related activities make up more than 50 percent of the gross domestic product, it is deemed normal that any reexamination of development of the sector take into account many aspects of the social and economic life of the country and consider the activities and occupations of the diverse actors in the

sector. As a consequence, the food sector strategy must simultaneously satisfy a certain number of principles of action in order to be valuable and efficient and be guaranteed long-lived relevance. The following eight principles are put forward as the basis for development of the strategy to date:

1. take into account and develop the strategy by ecological zones;
2. reduce the bottlenecks to development and develop the potentialities;
3. base actions on local needs and stages of development;
4. create conditions for rural people that favor their remaining in the rural areas;
5. define technological innovations based on their long-term applicability to the farm situation;
6. concentrate government means and efforts at critical points and leave the rest of the development initiatives to the private sector;
7. take into account regional considerations in development planning and implementation; and
8. allow sufficient time in planning and implementation activities to obtain the desired results.

With regard to the first point, it is stated that the food sector strategy must enunciate general principles for development but the application of these principles must be made operational at the level of the various ecological zones in Mali. This is so because:

1. the particular conditions of food production and diet are closely

- related to a particular zone's climate, soils and vegetation;
2. the types of production in any particular zone determine the linkages between that zone and the areas outside the zone;
 3. the population pressures in relation to zonal productivity create disequilibrium situations between surplus and deficit zones;
 4. the infrastructure and capital equipment created by previous local and governmental investments vary from zone to zone; and
 5. the potentialities and means for achieving them differ from zone to zone.

The implementation of the food sector strategy must, therefore, take into consideration the stratified nature of the country using ecological zones. This will bring greater efficiency in planning and implementation and will permit the strategy to respond to a major preoccupation of the government which is the reduction of inequalities between regions. These inequalities are likely to remain for a long time if planning is done exclusively on a national basis.

The government has charged the Ministry of Plan with the responsibility of installing a team of multidisciplinary Maltese experts, who will eventually be aided by foreign experts, with the mission to propose practical means for implementing the food sector strategy in each ecological zone. It is not anticipated that this task will involve long studies but more simply will use existing statistics and reports for each ecological zone and will interview representatives of principal economic groups in each zone to:

1. determine desirable development initiatives;

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2. determine what is possible from among the desired alternatives;
3. evaluate alternative available means for accomplishing these initiatives;
4. prioritize and schedule the possible initiatives; and
5. determine desirable levels of external aid needed.

The Ministries of Plan and Agriculture have already used this approach in relation to two previous development planning exercises but on this occasion the principal focus will be on food self-sufficiency issues and work will be guided by the points elaborated in the food sector strategy.

Team work will be done simultaneously which will permit the centralization of proposals and data relating to nutritional needs with the view toward establishing general food balances in terms of calories, proteins and the like and relating them to agricultural production, available equipment, funding, etc..

When the individual parts of the teams' work are completed, the members will negotiate final zonal plans and further elaborate the food sector strategy to:

1. fit in with options decided by government;
2. choose, from among many proposals coming from the regions, the most favorable ones; and
3. allocate resources with the view toward reducing regional inequalities.

This work will be done so as to project plans for five, ten and fifteen years.

12.

With regard to reducing bottlenecks and developing potential, several alleged constraints to development are specifically mentioned.

They are:

1. the traditional rural society's tendency to live in self-contained, independent economic units;
2. the farm family's habit of "keeping its cash income in the mattress" or investing it in unproductive livestock;
3. the farm family's habit of marketing only enough agricultural produce to meet immediate cash needs;
4. the tendency of the Operations to be too authoritarian in dealing with farmers, particularly in groups;
5. the quotas for cereal deliveries previously imposed on farmers by OPAM which are viewed as coercive and ruinous of good communications;
6. the previous monopoly control of the cereals market by OPAM which eliminated beneficial private sector participations;
7. the bad transportation system in the country which isolates potentially good agricultural areas from markets and development;
8. the educational system which favors entry into the governmental administration to the detriment of agriculturally-related activities;
and
9. the poor educational skills base for preparing rural people for production in agriculture and related rural activities.

With regard to basing actions on local needs and stages of development, the major stress is placed on changing the attitudes of the economic

agents in the food chain. The impetus for this flows from the government's decision to base development on a bottom-up approach centered on village groups. It is deemed necessary, therefore, for government to make rural people aware of their expected new roles so that they will not "be content to be just peasants". Similar training is deemed necessary for private traders to teach them to be "responsible economic agents" and not speculators and opportunists.

With respect to point four, the major stress is reducing rural-urban migration. This is to be accomplished in the long-term by:

1. establishing sufficient rural incomes;
2. diminishing the amenities gap between city and rural living by providing more services in rural areas;
3. organizing socio-professional groups of farmers, tradespeople, and traders to participate more fully in development activities;
4. promoting artisanal units and agro-industrial plants in agricultural zones to generate local employment.

Point five centers basically on the search for appropriate agricultural technologies to be used with animal traction techniques. In this regard, the Malians say they are looking for technologies which are less costly, more adapted to farmers' needs, easily taught and adopted, and generalizable to large numbers of farmers. They state that even if the individual productivity gains are smaller from these technologies this is preferred to the situation of a small number of highly mechanized, sophisticated operators producing the bulk of millet, sorghum and maize.

With regard to rice and other irrigated crops, however, the goal is

Again, for agricultural processing industries, the direction is said to be toward smaller scale units, simply maintained and using renewable energy sources.

On point six, the search is said to be for means to allow the government to divest itself of many of its previous activities and turn them over to private sector agents. This is to apply not only to current actions in cereals market restructuring but also in areas like assumption of recurrent costs.

Point seven is simply a recognition by the strategists that implementation cannot proceed without taking account of the regional effects of the strategy. The linkages in the region are said to be too important to neglect. These are seen to be particularly important in exports of cereals and livestock, in price determinations for grains, and in the establishment of regional grain security stocks.

Finally, with regard to point eight, there is the recognition that changes of the magnitude envisioned in the food sector strategy are going to take time and that planning must both take this time dimension into account and provide mechanisms for adjustments as future events warrant them.

D. The Objectives of the Food Sector Strategy and the Means of Applying Them to the Food Chain; Chapter III

The operational objectives of the food sector strategy and the means of applying them are discussed in this chapter as a function of the various links in the food chain: consumption and nutrition, production, transformation and processing, commercialization, and logistics.

Five Year Plan 1974-1978, there will have to be a concrete definition of the objectives of the plan for food self-sufficiency, the levels of food production to be attained, the means and methods to be used to realize the objectives, and the like. In this regard, it is necessary to view the strategy as a chain where each link must be strong in order that the chain does not break.

In addition, it will be necessary at the national level to define objectives and decide on means, based on the themes that are common to all the ecological zones, and to arbitrate between the regions with a goal of assuring the preeminence of the public interest.

In addition, the implementation of the overall strategy will necessarily have consequences for five year planning exercises, starting with the current Plan over its final three years. These changes will also involve changes and modifications in current donor activities.

With regard to consumption and nutrition, the choices are stated to be between:

1. a minimum food diet which covers basic needs to survival but gives no margin of security and permits no variations in intake; and
- 2, a recommended balanced diet which takes health and environment into account and envisions a margin of safety over and above the survival level.

The second choice is adopted in the strategy. The diet is to be based on a proper balance of carbohydrates, fats and oils, proteins, vitamins, and minerals. With this in mind, two types of diet are proposed:

1. a diet based on cereals, with 85 percent or more of total calories from these sources; or
2. a more balanced diet, with 60 to 70 percent of total calories from cereals, plus vegetable and animal proteins, fats, oils, vegetables, fruits, etc..

Again, the second choice is adopted.

The strategy then discusses a diet based on a need, defined by FAO/OMS, of 2,450 calories per person per day to be supplied by cereals as 70 percent of total calories. When losses in processing and storage are taken into account - e.g. 15 percent for millet, sorghum and maize and 48 percent for paddy - and one calculates each kilogram of prepared grain will yield 3,720 calories, the total cereal requirement per person per year is estimated at 224 kilograms for a diet which is 70 percent cereals, of which 21 percent is rice. The balance of the diet is to be derived from vegetables, fruits, fish, meat, milk, etc..

The strategy then discusses in general terms the improvement of the system of food storage, after claiming that Malian families lose between 20 and 25 percent of the annual harvest between the field and the dinner table. In addition to the merits of better storage, the strategy mentions joint research with neighboring countries on:

1. better milling of cereals;
2. better preparation of rice to retain nutritive characteristics;
3. blending flours from local cereals with wheat to reduce wheat imports;
4. producing fast-food products from local cereals for urban families;

5. producing foods to be used in weaning babies; and
6. preparing vitamin and mineral complements.

Also with regard to this nutrition section, the strategy discusses the following items in general terms:

1. nutritional education for Malians;
2. linkages between improved nutrition and improved purchasing power of Malian families;
3. linkages between nutrition and preventative health measures;
4. identification of and providing supplements to nutritionally-disadvantaged groups; and
5. nutritional surveillance techniques.

With regard to the directions future food production in Mali should take, the strategy talks about the need to consider both quantitative levels of food production and their related nutritive values. It contends that this double objective function implies "significant modifications in the current choice of food production activities". In balancing of quantitative and qualitative food needs of each ecological zone against natural resource potential, human and technical means, and constraints to increased production, one will find deficit and surplus zones. In these cases, not only must local production increase, mechanisms must be found for effectively transferring food between zones.

In pursuing the objective of cereal availability of 224 kilograms of grain per person per year, of which 21 percent will come from rice on average, the strategy recognizes that both rainfed and irrigated production of cereals will be necessary. For rainfed cereal production, the following

points are made:

1. rainfed cereals research and extension efforts should concentrate on yield improvements per hectare;
2. effective extension of improved techniques must be spread to zones with good potential which have previously been neglected;
3. research must be accelerated with regard to local legume and oilseed crops;
4. improvements of cereal production should be made in connection with cotton production in the south - i.e. Mali Sud - and livestock in the other zones; and
5. livestock must be used in the cereals program to provide organic manures and primary motive power and forage production must be improved in rotations as a consequence.

It is stated that, although rain fed cereal production has high priority and affects most of the farmers in Mali, it can never solve the food problem alone, principally because of the growing demand for rice in the urban areas. Therefore, government has decided that it must double national rice production over a period of ten years. To accomplish this objective, the following actions are said to be necessary:

- ete rehabilitation of existing irrigation canals;
- scale land management schemes to permit total control management of irrigation water in the future; and
- programs for certain irrigated perimeter developments.

In all rice efforts, emphasis will be given to yield increases per hectare per crop, to double-cropping where possible, and to complimentary

fish culture in the rice areas.

With regard to livestock, emphasis will be placed on short-cycle feeding programs, in addition to traditional programs aimed at exports of large animals - i.e. cattle. In the rivers, fishing must also be developed further and fish culture should be encouraged. The same is generally true for forestry activities related to the cropping programs.

With regard to the organization of food production, the strategy contends that the problem of how to improve "production agents" is the number one brake on development at present. This is given the first priority in the strategy. "Productive structures" must be improved at two levels:

1. "structures at the base": rural families, farmer and herder groups, and Operations; and
2. "structure at the center".

The discussion that follows about the "structures at the base" stresses:

1. the necessity of viewing the farmer in the context of his whole farming system and not simply as a producer of cotton, rice, maize or the like;
2. that the farm family must be seen as an economic unit that both produces and consumes and is integrated into a village social structure;
3. the role of village groups in future food production and commercialization activities; and
4. the generally poor results obtained from the Operations approach to date - to be further elaborated in the ~~SPM~~ ^{SATEC} study of the

Operations when it is released.

As to the "structures at the center", the discussions focus on:

1. greater efficiencies and better financial management across the board;
2. better coordination of development activities within and between government agencies;
3. better program and policy formulation and evaluation ; and
4. rehabilitation and development of the central input purchasing and distribution organization, the institutions for agricultural credit, the institutions for technical training and extension, the central bureau for agricultural statistics, the institutions for agronomic and livestock research, and, finally, the institutions charged with financial policy formulation.

With regard to food processing industries, the strategy again stresses that choices must be made between centralized, large-scale processing plants and smaller, artisanal-type units. It raises a series of questions about this issue but does not reach any firm conclusions at this point.

On commercialization of food products, the strategy emphasizes decisions already taken in the context of the cereals marketing restructuring process. It again stresses that cereals imports are not to be viewed as a normal part of the food sector strategy but, in the short-term, imports will serve to allow easier passage to the envisaged improvements in the marketing system. Furthermore, the long-term objective is stated as once again making Mali a net grain exporter in the region. It also states that cereal liberalization activities will be extended to the

rice market when it can be shown that this will lower the retail prices for rice.

The point is made that farmers can receive a "real minimum price" - presumably a real economic price - only when the marketing of grains from the farm-gate to the first point of sale is improved. This is envisaged to take place primarily through better organization and the increased participation of farmer marketing groups - i.e. cooperatives of some sort. Also, the regional Operations must introduce some more flexibility into their marketing operations in line with the liberalization policy, particularly with respect to allowing farmers to sell their products to the highest bidder and not exclusively to the government.

With regard to retail price ceilings for cereals, OPAM's role in intervening in the grain markets to prevent "sky-rocketing retail prices" is affirmed. It is stressed that the issue of constituting adequate regulatory grain stocks and means to manage them must be developed in detail. At the end of the five year adjustment period, it is expected that the current "baremes" will no longer have any effect on marketing margins and that all contracts with large grain dealers will be subject to individual negotiations. In this process, the real costs of marketing margins will be respected under the principles that the real costs of marketing must fully covered and the marketing agents must receive sufficient remuneration for their services. The need to follow closely the relative price relationships between cereals, in relation to costs of production, is also stressed so the government will have the means to direct consumption policies toward one cereal or another.

Finally, the marketing section emphasizes that the cereal markets are not to be conducted in anarchy but good order which necessitates a good information system to:

1. forecast cereal production by ecological zones;
2. forecast the percentage of the annual crop which will be sold through commercial channels;
3. retain accounts of grain stocks at various levels; and
4. observe and broadcast farm-gate and retail price levels for cereals in the various markets.

With this in mind, the roles of the central bank and the BNDA are stressed in collecting information and in facilitation of financial transactions of all kinds for private traders under the liberalization program.

Lastly, with respect to the logistics of the cereals marketing system, four objectives are stated:

1. improvement and expansion of the transportation network, including roads, river transport, and railroads;
2. restructuring of the rolling stock of trucks involved in cereals marketing;
3. integration of cereals storage units; and
4. coordination and regional planning of transport movements to yield greater efficiencies in road use and use of vehicles.

Individual actions emphasized in attainment of these objectives are:

1. greater involvement of farmers and farmer groups in input and output marketing at and below the arrondissement level;
2. realistic costs of transport by private traders;

3. greater flexibility of taxes and fees imposed in cereal marketing;
4. greater stress on procuring smaller, four-wheel drive vehicles for cereal marketing at the local level;
5. better transportation system development between surplus and deficit cereals zones;
6. better utilization and improvement of on-farm grain storage facilities; and
7. better coordination in use of OPAM and SOMIEX warehouses, grain silos, and hangers for cereals storage and marketing.

E. The Strategic Options of the Government in Implementing the Food Sector Strategy: Chapter IV

Further programming and control in designing and implementing of the food sector strategy will be in the hands of a permanent planning group which will be charged with:

1. establishing schedules for implementing all actions under the strategy; and
2. evaluating the foreseeable consequences of all these actions on government's technical, economic, financial and social planning, particularly as related to impacts in five areas: retail price levels, state budgets, commercial trade balances, consumer incomes (both urban and rural), and domestic savings.

This group is viewed as indispensable to guiding and monitoring the strategy process and in proposing necessary corrections in any part of it. It will be particularly interested in finding means to recover from farmers

the investment costs to the government of the large irrigated perimeters, along with other financial credits.

As to national coordination of the strategy, it is realized that, in the pursuit of greater realism in applying the strategy to the eleven ecological zones, there is a risk of creating an anarchical administrative and planning situation. The government, therefore, must be careful in organizing the control of operational and financial affairs of all the Operations, Actions and projects put in place in the Regions. These controls will be brought to bear on the planning, execution and evaluation phases of all such projects.

With regard to present and future research, it is said to be necessary to lay out very concrete priorities which will lead directly to attainment of the food sector strategy objectives. Therefore, the future research program will be directed toward the research needs of each of the ecological zones and will entail:

1. work that is closer to the actual level of present farmer-managed farming operations;
2. work that integrates livestock and crop enterprises;
3. work that allows results to be made available to and absorbed by the farmers quickly;
4. work directed at technologies for grain storage and loss controls;
and
5. work on human nutrition and related food processing techniques.

With respect to government investment planning, the following items are mentioned:

1. improving and extending the network of roads and trails, particularly in high potential agricultural zones and where used by livestock during transhumance and marketing;
2. increasing the use of paid rural labor during the dry season to maintain and repair roads and trails;
3. directing forestry and related investments toward:
 - a. protection against fire and overuse;
 - b. creation of new forestry reserves;
 - c. reforestation by villagers, larger groups and Operations;
 - d. soil conservation;
 - e. reduction in animal poaching;
 - f. creating new wildlife reserves;
4. rehabilitating of irrigated perimeters as per the current Plan with preference given to "simple techniques which minimize recurrent costs";
5. using local mineral resources to make simple fertilizers - e.g. phosphates;
6. industrializing of livestock processing and cold storage of meat and fruits for export and domestic consumption;
7. developing artisanal, semi-industrial, and industrial plants for food processing which will minimize costs and use renewable energy;

8. restructuring of the country's motor fleet to favor smaller, all-terrain vehicles and add refrigerated trucks for export of meat, fruit and vegetables;
9. maintaining adequate grain security stocks against calamities; and
10. maintaining regulatory grain stocks under the cereals restructuring process.

On institutional matters, the strategy reviews the present situation with the following institutions:

1. village associations and socio-professional groups;
2. Operations for rural development;
3. "Centrale d'Achat" or central buying agents for inputs and equipment;
4. National Bank for Agricultural Development (BNDA);
5. Central Statistics Bureau;
6. educational institutions in general; and
7. other diverse financial offices and parastatal organizations.

For the most part this discussion is again very general and reiterates many of the same points raised earlier. The same is true for discussion in a section labelled "Information, Education, Extension and Aid to Farmers". Here, there is discussion related to the roles, responsibilities and needs of six different groups: farmers, private traders, rural leaders, government technical personnel, government administrative officials, and consumers, in forwarding the strategy.

In a section discussing economic affairs, a number of key points are made. They are that:

1. fixing floor and ceiling prices for cereals requires economic studies at the farm level which relate prices to the prevailing farming system(s) and not simply to single crop cost of production calculations;
2. defining equilibrium prices between major cereals and cash crops is necessary if the farmers are to receive "minimum acceptable incomes";
3. retail price studies for cereals will be done based on studies of technical and commercial costs and margins for the various actors in the food chain;
4. retail price studies of the same type will be completed for livestock and meat products;
5. a study of fishing and fish products will be conducted to include the economic conditions of fishing, fish marketing, and fish consumption;
6. procedures will be devised for price setting and administration based upon the results of the above studies on cereals, livestock, and meat;
7. procedures will also be installed with regard to setting official prices for agricultural inputs and equipment, taking into account government subsidy packages to stimulate production;

8. calculations of cost prices for transportation per kilometer -
 i.e. the baremes - will be revised and rendered more realistic;
9. procedures with regard to imports and exports will be made more precise, particularly as pertains to the respective roles of private traders and government agencies, like OPAM;
10. liberalization of commerce in rice will be considered if means can be devised to reduce marketing costs and increase production of paddy;
11. the planning group will be charged with studying cereal storage and related transportation problems with an eye toward restructuring these areas in each ecological zone; and
12. there will be studies of the coordination and planning of regional movements of merchandise.

Under finance and fiscal management, the planners make the point that the installation of such a food sector strategy constitutes an investment for which the precise costs have not yet been calculated. To fully appreciate what these costs might be will require an operational strategy which has been fully negotiated among all parties. However, at this point, certain financial principles can be proposed as relevant to the process. They are:

1. the costs of implementing any such strategy must be reimbursed largely from the productivity increases engendered by it;
2. the financial burden of the strategy must not surpass the financial resources of the State, including government and private funds;

3. the interventions of the government must be limited to financing major capital investments, the operations of development, education and training activities, and a limited number of temporary subsidies;
4. use of public infrastructure by private agents must be reimbursed by user fees;
5. the installation of fiscal policies which encourage producers to work and produce will assure the return of sufficient resources to the government and permit it to play its proper role;
6. by "social contract" between the Malian government and the community of donor agencies, the country will have the power to secure sufficient financing for those investments which are linked to the attainment of the strategy's objectives; and
7. with regard to external financing, it is anticipated that it will not be a question of asking for large additional sums of money but one of allocating existing and projected resources from the donors for better development results.

F. Measures for Application and Recommendations to the Donors: Chapter V

The food sector strategy, which was approved by the Malian Council of Ministers in July 1982, constitutes a coherent body of propositions destined to result in a process of change and innovation toward the attainment of food self-sufficiency by the Malian population. This strategy raises two series of questions for aid donor agencies in Mali:

1. The first involves questions about what will be the modes and domains for future cooperative interventions between the donors and the Malian people; and
2. The second revolves around the relationships between the implementation of current projects in Mali and the articulation of new projects which are to be developed from the food sector strategy.

The food strategy is presented as a system of interrelationships between the different socio-economic actors in the food chain. The options retained by the government, with their resultant programs, have been chosen with the following objectives:

1. To make activities more efficient;
2. To reduce technical and economic costs in the food chain;
3. To facilitate transfer to the private sector of financial commitments which have become too burdensome for government; and
4. To reserve for government those activities which will stimulate the food sector, better organize the food chain, and control markets in an aggregate sense.

This change in the approach to Malian development can be viewed as a change in how projects and actions will be conducted. What is fundamental is that the proposed strategy is a global one. To attain food security, the inventory of projects and actions presented and implemented must move forward simultaneously so as to achieve the synergistic effect which will make all the difference.

integrated and presents a package of programs designed to improve the productive performance and life of rural families, the food sector strategy will put forward a package of programs and actions and each of these individually will play a specific role in attaining the overall objective. This is a matter for reflexion by the donors.

While it is true that the interventions of the donors in the agricultural sector already are integrated in a sense, what is new is that from now on the interventions must conform to a coherent Malian food sector strategy. This strategy is marked by defined medium- and long-term objectives tied to the attainment of food security. The preparation of project identification documents, prefeasibility and final project papers, and the putting in place of technicians and financing for these projects will probably change as a result of the new strategy directions. It is understood that most of the areas already covered by technical assistance and financing through donor support will be retained in the future but they may be grouped differently. It is also possible that new areas of intervention will be proposed and it is probable that the priorities flowing from the strategy will be different. These will concern, for example, the reduction of bottlenecks to development, the exploitation of as yet unexploited potentials, and the search for multiplier effects between all actions. The regional approach in the strategy must facilitate the adoption of this "package of programs and actions". Nevertheless, a combination of efforts and diverse means of cooperation must be present

in the future to respond to projects which are themselves to be more diversified and which will require diversified technical means more frequently in the future.

Each time important changes must be made in a complex process - and this is the case with the food sector strategy - the passage between the current situation and the future situation projected constitutes one of the most delicate phases to negotiate. This is particularly true when the changes envisaged are changes in orientation, direction, or the like. Even though the clear objectives and concrete programs flowing from a strategy of evolution are received and accepted by the economic officials of the government, Political Authorities can have many difficulties in modifying the "natural order of things". This is simply because "change cannot be decreed". The inertia in economic processes and the resistance with which people and institutions oppose change may constitute difficult brakes on the whole process. In this aspect, the donors can play an essential role vis-a-vis Malian Political Authorities in aiding them in negotiating the best possible change process in the future. This has already begun with the good example of the cereal market restructuring effort. It is desirable in this regard that each donor with projects currently under implementation conduct an analysis of each project to evaluate their actual impacts on the objectives of the food sector strategy. The extent to which these projects have positive or negative impacts on the process of attaining food self-sufficiency should be the objective of these examinations.

The ecological zone approach presented in the strategy will be adopted in order to conform to the strategic objectives and actions proposed by the CESA. This on-going analysis will be continued as the Ministry of Agriculture and the Ministry of Planning work on the problem of realligning the Five Year Plan with the objectives of the sector strategy for food self-sufficiency, approved by the Council of Ministers.

As a function of the calendar established to put in place the larger phases of the food sector strategy, modifications in projects will be made, new projects will be initiated, and it is probable that certain projects, which do not conform to the food sector strategy, will be dropped.

II. AN EVALUATION OF THE STRATEGY AS PRESENTED

The document which has been presented to the donor community in Mali under the title Elaboration de la Strategie Alimentaire: Commission d'Elaboration de la Strategie Alimentaire CESA dated July 1982 is considered by the Malian government to be both a final document and a step in a continuing process. It is final in the sense that it represents the presentation of a "food sector philosophy for Mali over the next twenty years and lays out the major objectives associated with that philosophy". It is a step in a continuing process because the government is well aware of the fact that the document is not yet an operational plan and, as written, cannot serve as the basis for specific food sector programs or donor projects in the short-term.

The intention of the government, as understood to date, is to continue the process of data collection, analysis, integration, planning and program formulation so as to produce an operational food sector strategy in the near future. This document, when finally produced, will serve as the basis for national planning in general and the production of five year plans in particular. The next of these plans is due in about two and one-half years and should cover the period 1986-1990. The work on the food sector strategy will continue under the direction of a revised CESA committee of Malian technicians from various relevant disciplines and ministries, chaired by the Ministry of Plan and supported by technical assistance specialists in specific fields supplied from and by the donor community.

If one compares the Malian document as presented - including the annexes which were finally obtained by USAID/Bamako on December 8, 1982 - with the recommended outline for a food strategy paper as presented in The Hague, Netherlands, at the World Food Council Workshop on Food Strategies in November 1980 and attached as an annex to this chapter, one must be impressed by the distance between what was supposedly expected from this strategy formulating process and what has materialized to date. In a sense, it is unfortunate that the donor community should be asked to respond to the current document in detail since, at this point, the process of strategy formulation is almost certainly more important than the realized production to date. The Malians are only beginning to come to grips with new strategic policy options in the cereals sector and related activities - and in some areas, even to begin to ask appropriate but painful policy questions is difficult - and the actual analysis leading to formulation of appropriate new economic policies and agricultural programs is just starting. The best judgement of this consultant is that one should not expect to see operational planning with quantitative analysis of policies and specific targets for attainment of objectives before the unveiling of the next five year plan 1986-1990. It is really only in the planning process leading up to that plan that government officials will have the opportunity to formulate and push for new policy initiatives unencumbered by the existence of an existing - and, in a sense, rival - planning document. Therefore, one must feel that the period between now and mid-1985 will be critical to supporting the on-going process with technical assistance as requested and in maintaining a constructive and detailed

policy dialogue with the government on food sector strategy issues.

In saying all of the above, however, there is still a need to review what has been put forward to date with a critical eye. The following criticisms, therefore, are presented not as rejections of the present document but as key points and issues which might be raised in the context of the on-going strategic process.

In strategic planning in any sector, any government at any given time might have several objectives which often involve very real and possibly painful tradeoffs between groups of the population or regions of the country. It is sometimes useful to categorize these objectives into two groups - basic and proximate. Three basic economic objectives can be distinguished as:

1. efficient generation of income;
2. more equal distribution of income; and
3. security - i.e. the probability of obtaining income.

The purpose here is not to claim supremacy for these basic objectives, since others such as avoiding inflationary impacts on consumers, food self-sufficiency, or regional balance in development, might be more important to governments. Nevertheless, these proximate objectives are desired chiefly because of their contribution to one or more basic objectives rather than as ends in themselves.

The validity of this categorization can be illustrated by considering the objective of self-sufficiency in cereals and particularly in rice, which is a stated goal not only of Mali but many other governments in West Africa. Each of the three basic objectives is influenced by self-sufficiency,

defined as the reduction of imports to zero in most years by increasing domestic production. Substitution of domestic production of rice from rice imports can generate income if the country has a comparative advantage in rice because it can produce it efficiently; alternatively, if domestic rice is more costly than imports, potential national income declines. Likewise, promotion of rice development to achieve self-sufficiency might change the distribution of income - among regions, between the public and private sectors, and between producers and consumers - in ways that either serve or contravene advancement of this government objective. Finally, greater reliance on local supplies of rice could lead to greater security of income to producers if new techniques reduce the variation of domestic production, and of food supplies to consumers if expanded local supplies are less costly on average than imports. But it could have the opposite effect if local production varies more than the price of imports and if there are other, more secure opportunities to use domestic resources to generate foreign exchange.

Self-sufficiency, therefore, can contribute positively or negatively to all three basic objectives. Although governments might place a high priority on this proximate objective, policy analysis is better served by measuring costs and benefits of increased self-sufficiency in terms of its effects on the three basic objectives. A similar argument could be made with respect to several other proximate objectives of the food sector strategy, such as the generation of government revenue, price stability, and regional development. As with self-sufficiency, it would appear preferable to examine

the influence of each of these intermediate objectives on income, distribution of income, and security rather than to consider it as an end in itself.

With regard to stated and quantified objectives in the strategy, there are actually only three:

1. the optimal provision of a balanced diet for every Malian at a daily caloric intake level on average of 2,450 calories;
2. the provision of 70 percent of this caloric intake from cereals, which is reduced to a total gross availability requirement of 224 kilograms of total cereals per person per year; and
3. the desire to have 21 percent of the total cereals requirement provided by paddy rice, with the remainder coming from millet, sorghum, and maize.

It is understood that all these targets are based primarily on FAO/OMS world nutritional standards and standard calculations of milling percentages for the primary cereals.

From the above stated targets, there would seem to flow three sets of interrelated questions focussed upon the:

1. the adequacy to Malian planning of using generalized world nutritional norms to set objectives for Malian diets;
 2. the relationship of quantitative targets, particularly nutritional targets, to the existing data bases and development projects on-going; and
 3. the central role of rice production in achieving the stated objectives.
- As to point one, it is suggested simply that many countries are already

questioning the applicability of generalized nutritional norms to their specific situations. For example, two of Mali's neighbors, Niger and Mauritania, have decided that the FAO/OMS nutritional norms are not entirely suitable for their planning purposes, with Niger deciding to raise their targets and Mauritania deciding to lower their targets. The point taken here is not that there is absolute truth in any nutritional norm but that whatever norms are adopted for planning purposes should be based on local nutritional situations and the research about those situations, rather than on more distant sources.

Anyone who has dealt with Malian development issues for any length of time and tried to evaluate and utilize existing statistics can attest to the paucity of any data in some areas and the dubious reliability of the data that are available in others. However, there does seem to be a rather conspicuous lack of quantitative analysis in the present strategy document, even after making every allowance for the data problems. This is perhaps most evident in those sections which purport to deal with nutritional issues. Nutrition and diet are stated to be one of the two basic concerns of the strategy yet they are treated throughout as "qualitative in nature" whereas any effective nutritional objectives in planning must be quantitative with regard to geographical distribution and demography of nutritionally vulnerable groups, the present status of nutritive needs and intakes in Mali, the desired targets for future planes of nutrition related to projected activities and life-styles, and other similar issues.

As a means toward this end, there seem to be several nutritional studies either recently completed or in progress which could contribute valuable Malian data and analyses to the search for realistic Malian nutritive targets. If the government is seriously interested in nutritional objectives as distinct from simply augmenting total cereals production, then they should begin to develop nutritional targets based on Malian data bases with judicious research conducted to fill in the many gaps in existing information and geographic coverage.

A related issue which touches both nutritional objectives and cereals production targets is the role of rice production in projected total cereals availabilities. The strategy calls for 21 percent of the gross cereals availability target to come from paddy. This has several implications which the government might wish to study in more depth. Among them are:

1. polished white rice, according to nutritionists consulted this week, can be a distinctly inferior food grain as compared to millet, sorghum or maize in nutritional equivalence for equal weight of grain. By actively promoting increased ^{RICE}~~white~~ production and consumption in the urban areas, the government could in fact be lowering, not raising, the nutritive states of some Malians who would be increasing their dietary dependence on rice.
2. the promotion of rice consumption in the urban areas, in addition to that consumed in the rural areas immediately around the rice development zones, runs the risk of creating two groups of Malians

with very different diets. For example, if McIntire's rice studies are correct, rural Malians currently consume twenty kilograms or less of rice per capita per year. Given this information and an rural/urban demographic split of approximately 87 percent to 13 percent, the strategy is actually putting forward the notion that urban Malians should receive their cereals calories basically from rice and wheat, as bread, whereas rural people should subsist on millet, sorghum and maize. The consultant has calculated that the split in rice consumption expressed in total paddy availability would mean that the average urban Malian would consume at least twice as much rice as a percentage of his or her diet as a rural Malian - and for more affluent Malians with regular, salaried positions, rice consumption would approach 100 percent of total cereals consumed with the rest being supplied by bread from imported wheat.

3. Since rice has been specifically excluded to date from the cereals liberalization program and is a relatively high cost grain to produce in Mali, the emphasis on rice production appears to result in a substantial if covert income transfer to urban Malians at the expense of all rural Malians and Malian rice farmers in particular. This occurs basically through the implicit tax on the producer through low official farm-gate prices for paddy, the constricted marketing channel used by OPAM, and the subsidized retail rice price in urban markets.

4. Finally, the projected doubling of paddy production in Mali in the next ten years will require enormous investments in the Office du Niger and other rice developments if the target is to be attained. This increase will total about 150,000 metric tons of paddy - or about 72,000 metric tons of rice after milling and other losses are accounted for. More than that increase in nutritive availability from cereals could be attained from millet and sorghum alone over the next ten years if technologies were found to increase aggregate production of these crops by only 1 percent per year or an aggregate increase of 8 percent over ten years. Revenues derived from such a productive increase in millet and sorghum would also affect a much larger population of Malian farmers than the relatively small numbers involved in current rice production.

All the above is not to say that there is no role for increased rice production in Mali in the near-term but only that the cereals strategy as presented might need some revision in terms of the balance between grains to be produced and perhaps even more importantly in reassessment of the incentives and disincentives to rice farmers in Mali brought about by the exclusion of rice from the cereals liberalization policy.

The use of ecological zones to define strategy operational objectives is difficult to assess at present. Intuitively, one must consider the move good for agricultural planning because it should tie crop production more closely to underlying soil, water and vegetation conditions in a particular zone but it also might turn out to be an administrative nightmare for

planners and administrators to the extent that:

1. ecological zones are presently ill-defined and estimates of their number vary from the eleven in the 1974-1978 Plan to upwards of twenty as reported by the Ministry of Agriculture this week;
2. ecological zones cut across administrative boundaries, are not contiguous units, and do not correspond to the present jurisdictions of the Operations;
3. ecological zones may vary greatly in size, demographics, and agricultural potential and may be very difficult to accommodate under an objective of "balanced regional growth and reduction of regional inequities; and
4. ecological zones are the subject of planning exercises which concentrate on autarkic self-sufficiency and neglect the natural complementarities between zones.

With regard to the agricultural incomes policy put forward in the strategy, one must say that it is very vague with regard to the actual incentives to be made available to farmers and their families. There is much discussion of the effects of the cereals liberalization policy for millet, sorghum and maize but almost all of this is in terms of output prices for cereals. An incomes policy, if it is truly to give proper incentives to farmers, should probably consider many more components of rural incomes than simply output prices. In the present context, these might include a review of tax policies as they affect farm families, the impacts of subsidy programs on both agricultural inputs and retail prices for agricultural commodities, the consequences of government investment

decisions on geographic distribution of agricultural projects, and the effects of government policies on non-agricultural goods and services available to rural households.

Finally, there are three related issues which should be raised in the context of the strategy presented to date and which are potentially very difficult to deal with. They are:

1. the question of the extent of political support for the strategy as opposed to the support from Malian technocrats;
2. the question of the government's implicit mistrust of free market economics and the recurrent desire to overplan and otherwise manipulate economic affairs; and
3. the overburden of government paternalism that is evident in the strategy and is likely to become more important in any operationalization of the strategy.

With regard to the first issue, there is not much that can be said with assurance at the moment but it is rather disquieting that the strategy itself in Chapter V makes specific reference to the problems and difficulties that Political Authorities might have in accepting elements of the strategy and changing "the nature of things" in Mali. This might be a clue as to why the strategy spends much time talking about policies, programs and sectors that have only tangential effects on a food sector strategy. The references to transportation policies, for example, may just be an attempt by some technocrats to raise important but not directly related policies with the Political Authorities in the rather non-political format of food sector strategy formulation. This would certainly explain the plea that is made in the

strategy for continued donor intervention with Political Authorities to show them the validity of the approaches taken in the strategy and presumably either garner or force political compliance with them.

With regard to the government's mistrust of free market economics, nothing much can be said at the moment. The Malian government has a long history of this mistrust - as, for example, in 1968-1971 when it mounted a similar cereals liberalization program only to stop it and resume extensive government controls in the early years of the drought - and only time will tell whether they are serious this time around. While the initial moves last year were quite encouraging to the donors, this year's failure to continue significant output price increases on the grounds that they could ^{not} make concomitant increases in government salaries sounds very much like previous Malian government excuses for not following a coherent and consistent rural incomes policy. Perhaps, the single most important point that must be gotten across to the Political Authorities in Mali is that true economic liberalization of the economy does not mean the government substitutes economic manipulations via OPAM and other para-statal for economic manipulations indirectly through private traders working on government licenses. If the private sector is to achieve any significant status in Malian society, it must ultimately be as a co-equal with the government in economic affairs and not as the government's manipulatory arm cum whipping-boy when economic times are tough.

Lastly, with regard to paternalism, we are in a nebulous realm of style in presentation. It is simply tedious and paternalistic of the government

A document such as the strategy to continuously refer to the need to train socio-economic actors to be responsible and realize their economic responsibilities, or to not be greedy, opportunistic and exploitive of farmers, or for farmers themselves to learn to be not simply peasants. Many studies over the last fifteen years in Mali have shown the private marketing margins are not excessive, that private traders are often squeezed and manipulated by stupid government economic policies, and that farmers, far from being simply peasants, are very receptive to innovation and change when they can see sufficient reliability in technologies and economic profits in their adoption. If any agent has been derelictic in realizing its responsible economic role it has probably been the government itself and at this point in time it has very little to be paternalistic about in economic affairs. It is almost certainly true that government plans to mobilize village groups, private traders associations, and various cooperatives will succeed almost exclusively on the basis of the government ability to create a favorable economic climate and provide sufficient incentives to the socio-economic actors to induce their cooperation in the future. The government simply will not achieve its strategic objective if it resorts primarily to political indoctrination sessions on economic responsibilities with private traders, or other actions of this ilk, as the vehicle for mobilization of human resources. Furthermore, the government must devise methods for extending economic carrots to the population since it has already tried and failed to have any significant positive effects on the economy by application of its various economic sticks in the past.

ANNEX TO SECTION II

The following outline was presented at the World Food Council Workshop on Food Strategies held in The Hague, Netherlands, on 19-21 November 1980, as an annotated framework for the formulation of a food strategy and the linkages to be established between its various elements. The contents of an actual strategy are recognized to vary depending on the food situation of the country concerned but they are assumed to approximate the outline.

I. FOOD NEEDS, OBJECTIVES AND TARGETS

This is an overview of the food strategy. It should establish an inter-related set of food production, food consumption and nutrition objectives. It would draw on, and summarize the results of the other parts.

A. Food Consumption Trends and the Degree of Malnutrition

The starting point for a food strategy is an assessment of the current food and nutrition situation, how it has evolved over some previous period, and the nature of the major shortfalls in food availability. It deals with:

1. Recent trends in food consumption and the nature of undernutrition.
2. Degree of undernutrition.
3. Factors contributing to undernutrition.

B. Food Consumption and Nutrition Objectives and Targets

The food consumption and nutrition objectives and medium-term targets of the food strategy would be based on the above evaluation and the Government's long-term food consumption objectives.

C. Food Production Objectives and Targets

Food production objectives would need to be established in light of the national food supply and nutritional requirements. Food self-sufficiency targets may also be set in relation to short-run and medium-term production potentials and import requirements. Consideration should be given to:

1. Implications of food consumption and nutrition objectives for food production objectives.
2. Self-sufficiency objectives for major food crops (short- and long-run).
3. Other food production objectives and targets.

D. Priority Issues in Food and Nutrition (Short- and Long-term)

This final section of this overview of objectives should summarize the

priorities the country is to assign to food and nutrition, as they touch on various food-related policies, programmes and projects that are dealt with in the remaining sections. These would be based on the first phase assessment of the relationship between these objectives and present efforts:

1. In agriculture.
2. In food consumption.
3. Outstanding macro-economic and agrarian policy issues.
4. Special nutrition efforts for vulnerable groups.
5. The use of food aid.
6. Project and programme priorities.
7. Priorities for further research and training.

The above summary is drawn from the following more detailed elements of the food strategy.

II. AGRICULTURAL PRODUCTION POLICIES AND PROGRAMMES

This section should present the major contributions the agriculture and fisheries sector will make to the national economy and to food supplies. It will probably have a traditional commodity focus which is most suited to the structures of most ministries of agriculture and natural resources. In assessing each commodity, the strategy should address itself to the income/self-consumption effect of how the commodity is produced and the relevance of the commodity within a target food consumption and nutrition context. Consideration should be given to policies and programmes to increase food production - including fisheries and livestock - such as, credit, extension marketing, food distribution, research, pricing/subsidy policies, and land reform when called for.

A. Current Situation and Recent Trends in Agriculture and Food Production

1. Trends in production by commodity.
2. Trends in consumption by commodity.
3. Exports and imports of food.
4. Other demands on agricultural sector.

B. Proposed Commodity Policies and Programmes

This section would be repeated for each of the major food commodities in this country, e.g. rice, corn, beans, legumes, sugar, oil crops, or others. For some crops, their special role as high protein suppliers may be highlighted as well as the possibilities for intercropping with non-food crops. The impacts of present food production policies and programmes on nutrition and food consumption levels, e.g., by location type of farmers and the incomes generated by present production efforts should also be reviewed.

Food Crops

1. Nutrition and Consumption Impact

- a. location of production and size of production units
- b. impact on income or self-consumption
- c. impact on availability and price of food to malnourished groups.

2. Production policies and requirements

- a. land
- b. inputs
- c. credit
- d. irrigation
- e. extension
- f. intercropping

3. Marketing and distribution policies and requirements

4. Research requirements for improved production

- a. technologies to which priority attention should be given
- b. agricultural extension and farmers' organizations
- c. institutional and manpower/training implications.

5. Price/subsidy issues relevant to:

- a. basic food crops and those most relevant to the malnourished
- b. production incentives
- c. export/import substitution possibilities.

6. Institutional implications and policy requirements for strategy implementation

- a. institutional implications and policy requirements for strategy implementation
- b. institutional coordination
- c. project and programme identification and implementation.

C. Fisheries

1. Nutritional impact

- a. location of production
- b. impact on income and self-consumption
- c. fish for malnourished groups.

2. Production policies and requirements

- a. marine fisheries
- b. inland fisheries
- c. municipal
- d. fish-ponds

3. Marketing, processing and distribution

- a. domestic markets
- b. exports, if any
- c. price/subsidy incentives to producers and consumers.

4. Research requirements

5. Institutional implications and requirements.

D. Livestock

1. Nutrition Impact

- a. location, type and size of production units
- b. impact of production strategies on income and self-consumption
- c. impact on availability (national and local) and price of meat and milk to malnourished groups.

2. Production policies and requirements - poultry, pork, cattle and dairy - especially in areas with concentrated poverty groups.

3. Marketing, processing and distribution policies.

4. Credit and price policies.

5. Import substitution/export promotion

6. Research requirements.

E. Other Demands on the Agricultural Sector

1. Agro-industrial

2. Export generation and import substitution.

III. FOOD DISTRIBUTION AND CONSUMPTION/NUTRITION POLICIES AND PROGRAMMES

A. Food Distribution and Nutrition Policies and Programmes

This section assesses the effectiveness of the marketing and distribution systems as they affect rural and urban food consumption, including what is needed for improved food distribution and marketing policies and programmes to reduce malnutrition.

1. The role of food distribution and marketing systems in reducing malnutrition

- a. efficiency of current marketing and distribution systems in relation to food consumption and nutrition
- b. reduction of post-harvest losses - storage and packing
- c. national policies and programmes influencing food consumption and

- and nutrition
- d. national and local security needs.

2. Implications for the food distribution system

- a. food supply and consumer price stabilization policy
- b. expanded marketing and food distribution network
- c. Improvements in procurement systems.

B. Food Consumption and Nutrition Policies and Programmes

This would deal with the adequacy of existing nutrition and health-related programmes and other direct food aid and special-feeding programmes for nutritionally vulnerable groups.

1. Evaluation of existing consumption and nutrition policies and programmes

- a. effectiveness of feeding programmes, integrated nutrition and health programmes in relation to nutritional need
- b. review of effectiveness of any existing food rationing or food stamp programmes.

2. Institutional structure and effectiveness in agriculture, health, education, welfare and planning

C. Possible New Policies and Programmes

From the above evaluation, the need for new food consumption, distribution and nutritional policies and programmes necessary to achieve the objectives of the food strategy may emerge.

1. Food marketing and distribution infrastructural needs

- a. required food storage, processing and distributional infrastructure facilities on national, regional and local levels
- b. organization of the wholesale sector in urban areas
- c. market information systems for farmers and consumers.

2. Direct consumption interventions

- a. food subsidy alternatives for low-income groups and for nutritionally vulnerable groups
- b. institutional feeding
- c. other food consumption programmes (e.g. food for work and home gardens).

3. Nutrition programmes

- a. integrated nutrition health programmes

- b. nutrition education and training
- c. combatting vitamin A deficiencies, goitre, etc..

4. Institutional arrangements

- a. planning and management requirements for institutional coordination and implementation and project and programme identification.

IV. OTHER MACRO-ECONOMIC POLICY ISSUES

This section is an analysis of macro-economic policy issues that have a bearing on the country's food sector and the nutrition status of vulnerable groups but are not considered within the agricultural or consumption/nutrition sections.

A. Food Price and Subsidy Policies

1. Combined effects of price, subsidy and tax policy on incentives to increase production of food (fertilizer and other input use - cost recovery)
2. Impact of food price policy on general consumption of food - e.g. stimulating effective demand
3. Impact of food price policy on the level of food consumption by undernourished groups
4. Budgetary implications - e.g. reallocating existing budgets versus subsidy financing through additional taxes
5. Administrative and operational implications of food subsidy programmes.

B. Employment, Income and Wage Policies

1. In the urban industrial sector
2. In the agricultural sector

C. Regional and Rural Development

Most development plans include to varying degrees some Integrated Area Development or Rural Development or an intraregional programme which generally involve extensive infrastructure, expansion and other services. Where such programmes are carried out, they should have a major, indirect impact on food consumption among the poor. The food strategy's concern with this issue is:

1. The priorities within the existing programmes as they relate to food consumption of low-income groups

2. Modifications of programmes which would have a greater positive impact of food consumption among low-income groups.

D. Agrarian Reform and Rural Development

A food strategy may, in several countries, need to consider the impact of agrarian reform on food production and on food consumption by the poor.

V. PROJECT AND PROGRAMME IMPLICATIONS

The food strategy should identify a package of food production, food distribution, and nutrition projects and programmes - largely derived from Sections II and III and, to some extent, from IV. Some of those can be identified while other project profiles may need to be further formulated.

A. Agriculture - Fisheries - Livestock

B. Nutrition

C. Other Economic Sectors.

VI. MAJOR POLICY AND RESEARCH ISSUES

This section would identify the most significant policy issues that may need to be resolved domestically and by the development assistance community, and identify the further research and analysis needed to improve the strategy.

A. Major Domestic Issues

B. Major Development Assistance Policy Issues

C. Research Requirements to Improve the Food Strategy over Time.

VII. INSTITUTIONAL ISSUES

To ensure wide government policy and resource support to the food strategy, as well as to establish the basis for successive revision and monitoring of the strategy over time, this section would identify the institutional coordination arrangements. This should include details on inter-ministerial coordination, on a technical food unit to monitor the implementation and revision of the strategy, and a project preparation and monitoring unit, if needed.

A. Operational Improvements, Evolution and Domestic Support of the Food Strategy

B. Institutional Management of the Food Strategy

1. Overall direction
2. Inteministerial decision-making, coordination and support.
3. Food planning, project formulation and monitoring unit.

C. Ensuring Support from the Development Assistance Community

1. Consultative arrangements
2. Direct interaction with bilateral and multilateral institutions
3. Special food investment consortia.

III. POTENTIAL LINKAGES BETWEEN THE FOOD SECTOR STRATEGY AND THE USAID COUNTRY DEVELOPMENT STRATEGY STATEMENT (CDSS) FOR MALI

A. Support to the Food Sector Strategy Process

As was stated at the beginning of the last chapter, the food sector strategy to date has the form of both a final document of developmental philosophy and objectives and a continuing process. The consultant has already raised some criticisms of the document which USAID/Bamako may wish to discuss with Malian government officials. However, the single most important conclusion drawn from the review so far is that USAID would be well served by encouraging the continuation and deepening of the process of policy analysis and strategy formulation in the Malian food sector.

The food sector strategy, as presented to date, makes a valid attempt to enunciate the principles and objectives of a Malian approach to the food sector. The document in fact points the Malian food sector development planning in some directions that are not only new but are quite radical departures from past thinking. Among these new directions are:

1. greater recognition of the farmer and his family as the central economic actors in the food chain;
2. greater willingness to have the government divest itself of many of its previously assumed roles and interventions in favor of private sector agents;
3. greater scrutiny by the government of its role in the economy particularly with respect to the disposition of capital investment;

resources, assumption of recurrent costs, and general administrative and technical effectiveness of development programs and projects;

4. greater concentration on effective policies and programs that will directly affect food production and distribution.

As such, the document presented merits the qualified support of the donor community; the chief qualification being that the general course proposed for sector development is accepted but that the document is a long way from being an operational plan presentable to the donors for funding specific projects. It is also evident that there may be several alternatives to attainment of each of the objectives stated in the strategy and each of these alternatives must be carefully quantified and evaluated before any optimal policy can be selected and the means determined to implement it.

As USAID is strongly encouraged to continue support for the strategy formulation process, it is perhaps valid to question the present format for policy analyses as evidenced in the first document. The consultant attempted in the last chapter to point out the differences in planning exercises between basic and proximate development objectives. At the risk of sounding rather pedantic on the subject, it must be pointed out that serious policy analysis will be extremely difficult in a context where every one of a large number of development objectives is considered to be basic to the attainment of the strategy and is thought to be closely inter-related with every other objective. The situation is somewhat analogous

in economics to production of input/output tables and their use in planning exercises. By the time one manages to analyze and quantify all the various interrelationships between sectors of even a moderately complicated economy and develop an adequate tool for planning, the data in the table are outdated and more pragmatic planners have already devised quicker and cheaper - albeit less sophisticated and elegant - methods for arriving at policy decisions.

In an effort to focus and simplify the process of policy analysis and the presentation of viable policy choices, which inevitably must be worked through if the food sector strategy is ever to be a more operational document, the consultant would suggest the following format:

I. GOAL:

To achieve a reliable food surplus for Mali and to reduce hunger in nutritionally disadvantaged country groups.

II. BASIC OBJECTIVES:

To achieve that stated goal through optimal attainment of the following basic objectives:

1. efficient generation of income;
2. more equal distribution of income; and
3. greater security - i.e. higher probability of obtaining income.

III. PROXIMATE OBJECTIVES:

Since it is clear that there are many alternative paths - or policies - to attainment of these basic objectives, the effective policy analysis will postulate these alternatives and evaluate their usefulness in terms of their projected impacts on one or more of the basic objectives -

e.g. the tradeoffs between self-sufficiency in grain production from domestic production versus cash crop production and foreign exchange generation to purchase grain; general retail price subsidies for grains versus targeted nutritional programs for disadvantaged groups; balanced regional investment versus government transfer payments to disadvantaged regional groups.

IV. POLICY SELECTION;

When alternatives have been carefully quantified and weighed in terms of their impacts on the basic objectives, a more ^{RATIONAL} ~~objective~~ basis is provided for selection of the alternative(s) which are projected to have the best - or conversely the least bad - impacts. The optimal policy can then be selected as the basis for attainment of the goal of the strategy.

V. OPERATIONALIZING THE OPTIMAL ALTERNATIVES;

Once an optimal proximate objective - i.e. policy - has been selected, it can then be the basis for setting operational targets over time to attain the desired policy results.

VI. DEVELOPING APPROPRIATE MEANS TO ATTAIN TARGETS;

Once targets are projected, the planners can begin to develop appropriate means to attain these targets. These means in the context of Mali may include legislative reforms, administrative realignments, capital investment allocations from government resources, appeals to the donor community for specific program or project support, and other similar measures. The most important thing here is that there is clear and coherent series of linkages between the strategic goal for the food sector, the basic

objectives, the proximate objectives or policies, targets, and means of attaining the targets, **כיצד יושג**.

In the absence of this sort of a format, the fear is that the objectives are viewed as a circular web of interrelationships which is almost impossible to sort out and analyze because every item is seen to impact on every other item in a massive constraints matrix. The only solution to this kind of a problem is a lowest common denominator - or, in linear programming terms, a boundary point on a very constrained feasible area.

Another projected advantage of this approach is that it would lead fairly quickly and directly to a costing out of the various alternative development policies and programs. And the lack of this sort of financial analysis is painfully obvious in the initial output from the strategy process.

With regard to USAID support to the current strategy formulation process, the consultant has a number of tentative conclusions and suggested areas for intervention with supporting technical assistance. The tentative conclusions are:

1. The mode of technical assistance that was adopted in the past should not continue in the future because it has proven itself to be too ad hoc in nature and, as a consequence, has too little sustained impact on Malian policy-makers. This in no way should be construed as a criticism of the particular individuals who were involved in the process previously since they obviously made the best of a poorly thought out situation but simply a recognition of the fact that the policy formulation process now has to be broadened and deepened and that this will require sustained technical assistance

2. The focus of this assistance should be the reconstituted CESA group and its satellite activities. Since this CESA group is to be directed by the Ministry of Plan in the future and since it is this ministry which also has responsibility for production of the five-year plans, it seems logical that most of USAID technical assistance for the strategy should be directed toward that ministry.
3. The technical assistance elements to be supported by USAID must be programmed for varying lengths of time with the longest projected for ten years.

The actual support activities recommended in connection with the food sector strategy fall into five categories. These categories are presented below with the approximate time period for assistance projected in brackets.

1. Data Collection and Statistical Analyses (ten years):

It is clear that the existing body of statistical information on Mali leaves much to be desired. It is also evident that without a continuing process for data collection and statistical analysis institutionalized in the Malian government the food sector strategy can never be operationalized at any acceptable degree of accuracy and reliability. This being the case, an economist could justify just about any potential assistance from the donors to the government in this area; however, four areas for data collection and analysis seem to be particularly high priority at the moment. They are:

- a. Crop yield estimation and crop forecasting methods;
- b. Farm management data, particularly, crop budgets using reliable

technical coefficients, financial and economic prices;

- c. Market price/quantity data collected on food grains from a broad spectrum of Malian markets - not just the atypical Bamako market; and
- d. Estimation of carry-over grain stocks and losses in the system from field to terminal market.

There is absolutely no pretense of this activity being anything but dull and tedious work with nothing flashy or sexy to recommend it but if the Malians and USAID are seriously interested in instituting an on-going food policy dialogue, the work is essential.

2. Food Sector Policy Analysis (ten years):

This activity flows directly from the data collection and statistical analysis proposed above and should be targeted at two processes:

- a. the formulation of an operational food sector strategy for the period through 2000; and
- b. implementation of that strategy through the five-year plans to be produced for the periods 1986-1990 and 1991-1995.

3. Evaluation of the Concept of Ecological Zones as the Basis for the Food Sector Strategy (two years):

The consultant has already raised questions about the feasibility of using ecological zones as a planning base but assistance could be given to the government in this area to better define these zones in Mali and to evaluate whether or not they can be utilized for planning and program implementation purposes. This assistance could probably be arranged through the existing PIRT/TAMS project, in

collaboration with CIDA assistance already in place in the Ministry of Plan.

4. Specific Work on the Economics of Rice Production in Mali
(minimum two years but could be longer if policies change):

The consultant believes that, whether or not USAID intends to actually involve itself in rice production projects in Mali, it is necessary to collect and analyze in some coherent fashion available information on rice production, marketing and consumption in Mali. This is so simply because the food sector strategy as formulated cannot succeed until the economics of rice are effectively dealt with and USAID cannot be a full and effective participant in the policy dialogue with the Mallians unless much more is known about rice than is presently the case. It is, therefore, recommended that the Mission, in collaboration with appropriate Malian officials, identify a potential rice development project and execute a comprehensive pre-feasibility study for the project, with particular emphasis on demonstrating the impacts of current Malian rice policy on rice profitability to farmers and intermediaries in the rice marketing chain. If, as expected, such a project is shown to be uneconomic because of the existing government policies, the Mission will have the entry it needs to address the changes that need to be made in this area based upon actual field information and a pertinent project example, rather than hearsay information and other donor experiences.

5. Search for Rainfed Cropping Projects in the 600 to 1,000 millimeter Rainfall Zone (minimum one year):

This is more of an internal Mission activity, although some technical assistance may be necessary in the later phases of the search. The recommendation is that the Mission concentrate on this particular rainfall zone because our farm budgets - and many other sources - have shown that it is the most productive and profitable area of the country for millet and sorghum production. Moving north or south out of this broad belt seems to result in diminished grain yields, reduced profitability of production for farmers, and much greater risks in production. Movement north is obviously related to diminished rainfall and movement south seems to be related to increased pest and disease damage to the grain crops, particularly millet.

While yet another area development project focussed on grain production is not totally ruled out, the consultant feels that other interventions of a direct nature should be analyzed. For example, analysis and research on existing grain technology packages for Mallan farmers is already being done but the search might be extended to determine what are the primary constraints to adoption of these packages by farmers. If lack of inputs is the major constraint, the intervention dictated would seem to be something with the new input delivery agency, the private sector, and the new agriculture credit bank.

B. Relationship of the Food Sector Strategy to the USAID CDSS for Mali

It was agreed this week that this section of the report is better written by resident USAID personnel in the program and agriculture offices. As a consequence, the consultant's contributions to this section have been oral and have been expressed in a number of meetings with Mission personnel, particularly over the last week of the consultancy.

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