

Chapter 29

PLANNING AND ORGANIZATION OF A NATIONAL FOOD AND NUTRITION POLICY

J.M. Bengoa & R. Rueda-Williamson

CONTENTS

	Page		Page
Introduction	419	Identification of possible programme alternatives or options	434
Definition and scope of a national food and nutrition policy	420	Formulation of a food and nutrition policy	435
Policies related to food supply	422	Implementation of a national food and nutrition policy	435
Policies related to food demand.	424	Implementation of the sectoral programmes and projects	436
Policies related to biological vulnerability	427	Evaluation and surveillance of a food and nutrition policy	436
Information required in the design of food and nutrition policies.	428	Special responsibilities of the health sector in the planning and implementation of food and nutrition policies	437
Organizational setting for the formulation of food and nutrition policies	429	Nutrition activities at the central level	438
National food and nutrition planning unit	430	Nutrition activities at the intermediate or state level	440
Decision-making group	430	Nutrition activities at the local health service level	441
Technical support groups	431	References.	444
Sequential steps in the formulation and implementation of food and nutrition policies	432		
Collation of basic information	432		
Establishment and analysis of diagnosis	433		

Introduction

Previous chapters have dealt with the nature of nutritional diseases (Chapters 2–10), the examination and analysis of nutritional problems (Chapters 11–14), and possible intervention approaches (Chapters 18–26). It is emphasized in Chapter 15 that many of the suggested intervention

programmes can be implemented independently or on an *ad hoc* basis in the face of urgent problems and if feasible approaches are available. However, it is also emphasized that approaches to intervention probably will be more effective and have longer lasting effects if they form part of a broad, integrated approach to the control of malnutrition in a country or region. Effective integration and coordination requires a policy to be established at the central level. A "food and nutrition policy" may be very comprehensive or may be quite limited in scope, depending upon the urgency of the needs, the resources available, and the feasibility of implementation. Regardless of its scope, an essential feature of any policy in this field of endeavour is flexibility, permitting continuing adaptation to a changing nutrition situation in a country.

Some of the broad considerations involved in the formulation of food and nutrition policy are outlined in this chapter; these are discussed under the five following heading:

- (1) definition and scope of a national food and nutrition policy;
- (2) information required in policy development;
- (3) organizational considerations for policy formulation;
- (4) sequential steps in policy formulation and implementation;
- (5) responsibilities of the health sector.

The concepts and views presented in this chapter are based on some recent publications (1, 2, 3) on the subject but particularly on the final report of an inter-agency consultative meeting on national food and nutrition policies in the Americas.^a

This chapter takes an overall view of food and nutrition activities in relation to national development. Individual nutrition intervention programmes are described in detail in earlier chapters.

Definition and Scope of a National Food and Nutrition Policy

A food and nutrition policy has been defined as "a coherent set of principles, objectives, priorities and decisions adopted by the State and applied by its institutions as an integral part of the national development plan in order to provide all the population, within a specified time, with the food and other social, cultural, and economic conditions essential to satisfactory nutrition and dietary well-being".^a Such measures should be aimed at ensuring an adequate supply of food, a sufficient and balanced demand or consumption in all population groups, and the control of the environmental factors that affect the biological utilization of the nutrients.

The food and nutrition policy must be formulated as an integral part of the national plans for economic and social development of the country and

^a *Inter-Agency Consultative Meeting on National Food and Nutrition Policies in the Americas, Santiago, Chile, 12-22 March 1973* (UNICEF document SIAC/PNAN-1).

must be carried out by means of coordinated sectoral programmes. It must also take account of the specific protection needed by population groups in which undernutrition and malnutrition prevail, including measures to increase the supply of food and nutrients through direct supplementation when the availability of food and the levels of consumption are inadequate.

This definition must not be taken to imply that a food and nutrition policy body should assume responsibility for generating and coordinating policies in all of these areas. Rather, the main function of the policy is to ensure that the nutritional implications of policies developed by the various sectors of government are given appropriate consideration. A special role of the food and nutrition policy body is to examine interactions between the various policies arising in the different sectors and facilitate the coordination of these policies for the improvement of the nutritional health of the population.

Most countries carry out projects of various types in the fields of agriculture, health, and education that are directly or indirectly related to the problems of food and nutrition. These projects are often developed in isolation from other activities, some are implemented to meet obvious nutritional or other health needs, while others, particularly in the fields of food production and processing, may initially have been concerned primarily with economic objectives. Although many of these projects may have been, and continue to be, successful, it is now apparent that coordination in the planning of complementary programmes and review of their primary objectives could greatly increase the overall effectiveness of the total national activity. In this connexion the development of a national food and nutrition policy is a matter of major importance.

Two aspects of the concept of "food and nutrition" policy outlined here may differ from those presented in other reviews. First, food and nutrition policy development is seen here more as the stimulation and coordination of policies in the various sectors of government than as a process of formulating the primary policies. The task of the food and nutrition policy body is to study the implications of the sectoral policies and their interactions on the nutritional health of the population.

Second, the authors of this chapter feel that a food and nutrition policy should be primarily concerned with factors affecting the health of the population. A distinction is therefore made between "food and nutrition policies" and "food policies". To illustrate this point, four types of problem that are sometimes included in discussions of food and nutrition policy can be considered.

(1) Food problems having important economic or other implications but no direct effect on health and nutrition;

(2) Food problems having important health implications of a toxicological nature (presence of food contaminants, additives, etc.) but only occasionally of a nutritional nature;

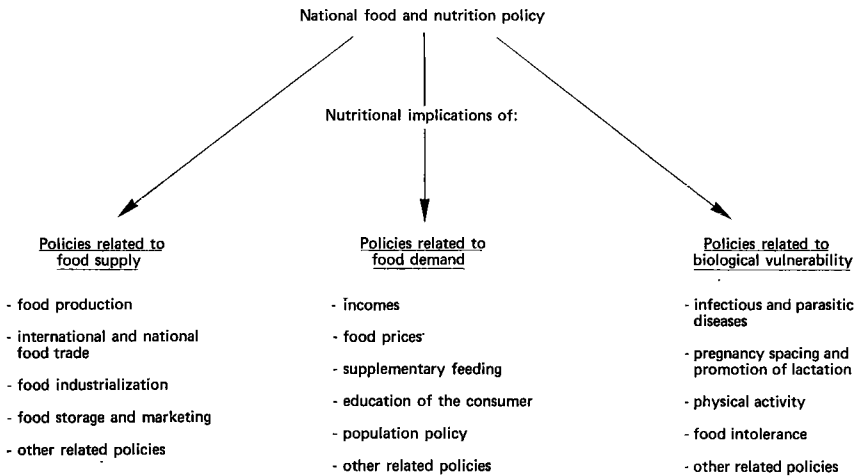
(3) Food problems having important health implications of a nutritional nature;

(4) Nutritional problems not related to food.

Problems of types 3 and 4 are seen as being within the direct purview of food and nutrition policy. Although problems of types 1 and 2 are sometimes included in discussions of such policy, the view of the authors is that these problems can be of such major concern, and the resources and manpower requirements needed to deal properly with them so specialized, that to include them within the scope of food and nutrition policy is to run the serious risk of giving inadequate attention to the primary nutritional questions. Coordination between food and nutrition policies and food policies is, of course, vital, but separation of the primary planning activities seems to be desirable. The distinction can be seen by considering the following topics: (1) how food policy relates to nutrition; (2) how nutrition policy relates to food planning.

Operationally, a food and nutrition policy is actually a composite of related policies that may be subdivided into three main groups (see Fig. 1).

Fig. 1 Scope of a national food and nutrition policy



WHO 75652

Policies related to food supply

The availability of foods (*food supply*) is determined by a large number of factors in both production and distribution. Agricultural production, animal raising, and fisheries depend on the existence of agricultural land, the quality of the soil, rainfall or irrigation measures, a supply of fertilizers,

the quality of seeds, crop varieties, breeds of animal, the health of animals and crops, and technology and human skills.

Distribution of food at the local level, on the other hand, depends on factors related to various links in the food chain starting from the producer and ending with the consumer, thus introducing the whole marketing process including storage, processing, and packaging of foodstuffs, as well as transportation and distribution to the local market or shop. Many aspects of food production and marketing are discussed in Chapters 24 and 25.

Food supply policies include all governmental measures intended to secure an adequate food supply in the country, as regards both quantity and quality, according to the nutritional needs of the population and taking account of the consumer's ability to buy food. Five food supply policy areas can usefully be distinguished.

Food production

This policy relates to measures for expanding the area of productive land (colonization, land reform, irrigation, soil drainage) and improving the utilization of existing agricultural land through mechanization and advanced agricultural technology, increased use of fertilizers, the provision of better seed and animal breeding stock, genetic manipulation, prevention and control of animal and plant diseases, etc., and for selectively expanding production of specific foodstuffs, especially the cereals and legumes that are staple foods in a country. At the same time, this policy should take account of the nutritional needs of the population and the economic policies of the country, and balance the need for economic incentives for producers of basic foodstuffs against the need to stimulate a greater consumption of those foodstuffs by keeping down prices.

International food trade

This area includes policy on customs duty to be levied on imported foods in the light of the dietary needs of the population, the protection of national food production, and effects on prices to the consumer. It also includes examination of economic and nutritional implications of regional, subregional, and bilateral agreements related to food products and to the policy on export and import of specific foodstuffs, including food donated under multilateral and bilateral arrangements.

Food industrialization

This area includes policy related to the development of a food industry and the increasing use of food technology, especially for certain products such as fish, milk, legumes, weaning foods, and protein-rich foods. It includes also research activities aimed at identifying industrial processes that it would be feasible to install after adapting them to meet local problems

and conditions. It also covers legislation related to norms or standards for the composition of natural or processed foodstuffs, food hygiene, and, to a lesser extent, food additives, packing, labelling, and trade marking of processed foods. An important aspect of this policy is the fortification of foods, including iodization of salt, fluoridation of drinking water, and enrichment of cereals, milk, fats, and other foods with mineral salts, vitamins and other nutrients such as protein concentrates. This is discussed at greater length in Chapter 26, and recommendations and guidelines are to be found in references 5 and 6.

Food storage and marketing

This policy area includes various aspects of food storage (warehousing, silos, freezers, packing plants), which forms the foundation of marketing activities. It covers also railways, roads, and transportation systems for linking areas of production and consumption and all policy matters related to the organization and simplification of food marketing in the whole country to benefit both the producer and the consumer. In this way the income of the agricultural worker can be brought closer to that of the industrial worker. This area also includes the organization of cooperatives and the establishment of a network of popular stores or markets and, especially in marginal urban areas, operation of store-trucks to enable food to be supplied to consumers at a lower cost.

Other related policies

Certain aspects of the toxicological safety of the food supply are relevant to food supply policy; legislative policy on food safety control is therefore important. Related to this type of legislation are the standardization of the biological potency of nutrient supplements and the control of potentially misleading sales promotion for these supplements (see Chapter 22). Another important related policy area deals with the preparation of plans for disasters, which may seriously affect not only food supply and demand but also the biological vulnerability of the population (see Chapter 28).

In certain national situations other related policy matters may assume particular significance. For example, immigration policies may affect not only food demand questions (see below) but also the resources available for food production and the nature of food wanted by the consumers.

Policies related to food demand

Adequate food consumption by all the members of a family or community (i.e., food demand) also depends on another set of factors of an economic or sociocultural nature. On the one hand, available capital, levels of employment and of salaries, and food prices are important determinants of the purchasing power of the family. On the other hand, food customs and habits, beliefs and taboos relating to food, nutrition, health, and child-

rearing practices determine individual and family food preferences and feeding practices. Both sets of factors exert major influences on the amounts and kinds of food that are actually purchased in the market and consumed at home by individual members of the family.

Food demand policies embrace all governmental measures for ensuring that foods are available on the market and that consumers make an adequate selection of these foods. In relation to national demand, these policies also include factors influencing the whole population of the country. Six aspects may be considered.

Income

The basic purpose of an incomes policy is to increase the purchasing power of low-income families to enable them to satisfy their basic nutritional needs without having to spend a large proportion of their incomes on food. (In some areas of the world these expenditures on food amount to 80% or more of the family income, in spite of which the diet is unsatisfactory.)

Employment policy is a fundamental part of an incomes policy, some aspects of which are also relate to wage levels, allowances, and other social benefits as well as to the regulation of property for production and taxation policy designed to ensure a fairer distribution of wealth.

Food prices

This policy is an important link between supply and demand and must be kept in mind particularly in relation to policies related to the production and marketing of basic foods. By regulating or subsidizing food prices, it is also possible to stimulate greater demand and consumption in the more deprived socioeconomic groups. Relatively low prices represent, in fact, an increase in the purchasing power of the family unit, but since they may represent also a disincentive to production a careful balance must be maintained.

Another possible line of action is the study and formulation of a discriminatory policy with respect to the prices of foods according to their nutritional importance in the diet of the population and the economic situation in each country. Three different types of foods may be considered in this connexion.

(1) Foods that constitute the staple diet of the common man and supply energy and protein (especially legumes and cereals); continuing and effective control and promotion of these foods by the State is desirable in order to ensure that they are available to consumers at low prices and that they are regularly used.

(2) Foods of particular nutritional importance that form an excellent complement to the basic diet and thereby improve its nutritional quality; somewhat less stringent regulation and control would be required for such foods.

(3) Other foods that can be used to complement the basic diet and that vary greatly in different cultures or enjoy social prestige; a price control policy would be required for these foods only as part of a general economic control system.

It has to be recognized that nutritional considerations are not the only justification for the discriminatory control of food prices.

Supplementary feeding

This policy is aimed at providing preferential nutritional protection for the vulnerable low-income population groups (mothers, children, and workers) either free of charge or at a subsidized rate; it may also be an approach to the redistribution of income. It includes not only the distribution of food but also food stamp and family allowance programmes and the organization of canteens and other community dining centres. It is also concerned with the supply of nutrients (iron and/or vitamin A to mothers and children, and iodized oil to the population in goitre areas, etc.), which is usually undertaken as a preventive measure to protect high-risk groups when food supply and consumption are inadequate to meet the needs for a specific nutrient (see Chapter 21 for further discussion).

Nutrition education and consumer orientation

This policy includes the development of human resources in the fields of nutrition and food sciences, formal and informal education of different population groups, and consumer guidance through the mass media (press, radio, television). The regulation and control of commercial publicity for food products must also be examined in the formulation of a food and nutrition policy. Aspects of nutrition education are discussed fully in Chapter 20.

Population policy

A government's policy on population (emigration, immigration, internal migration, and family planning) relates directly to food and nutrition policy as well as to several aspects of national development. In any country the size of the family unit and the total population, that is, the number of consumers, strongly influences the adequacy of the available goods and services. Clearly, a food and nutritional policy must take account of the related population policy.

Other related policies

Some related policies are difficult to define in relation to a particular policy area. For example, the basic food purchasing patterns in low-income groups are usually economically disadvantageous to the family. Small packages or items of food may be purchased at relatively high prices by

comparison with the cost of larger quantities. Furthermore, in many areas food is purchased in terms of units of money, and the consumer may give no real consideration to the price charged per unit of quantity. Ways of tackling problems of this kind might be studied in various food policy areas.

The organization of consumers' cooperatives is another important aspect of a food prices policy, which will in addition encourage community participation in nutrition programmes.

Policies related to biological vulnerability

Many factors in the macro- and micro-environment can affect the digestion, absorption, and utilization of ingested foods, excessive losses of nutrients due to communicable diseases, or actual requirements for specific nutrients. These factors, along with the normal effect of growth, pregnancy, lactation, and physical activity influence man's *biological vulnerability*.

The relationships between parasitic and infectious diseases and nutritional status are discussed in Chapters 13 and 14, various physiological events that affect nutrient requirements are outlined in Annex 1, and discussions of the basis for variations in biological vulnerability and suggested approaches to control are to be found in many chapters. Although it is clear that certain determinants of biological vulnerability are characteristic of the host, food and nutrition policies directed towards biological vulnerability include a wide range of administrative measures that could improve the situation of the individual or population rather than modify food supply or demand. Five broad categories of policy may be considered.

Infectious and parasitic diseases

This includes a range of policies relating to health services for the prevention and treatment of infectious and parasitic diseases (particularly diarrhoeas); the policies include immunization, health education, food hygiene, and environmental sanitation. Housing policy is involved in so far as it affects the provision of sanitary facilities and safe water supplies, and, of special importance, population density in urban and periurban areas.

Pregnancy spacing and promotion of lactation

This relates to those aspects of national population policy (family planning) that affect the interval between pregnancies and to the age span over which pregnancies occur. An unduly short interval between pregnancies has two effects that are of particular concern: (1) sequential depletion of nutrients, and (2) restriction of adequate lactation. Legislative measures (social and other) designed to protect the welfare of lactating women and promote the breast feeding of infants are related to family planning policy.

Physical activity

In the face of great physical activity, accompanying measures are needed to ensure that the increased food requirements are met. A feeding programme may be needed in schools to compensate students for the energy expended in walking long distances to and from school. A study of the special energy requirements of heavy workers is of obvious importance in this connexion.

Food intolerance

Policy decisions are needed on the suitability of specific foods in human diets or, more often, on restrictions that must be placed on the use of certain foods because of intolerances to these foods in the population; for example, the questions of "lactase deficiency" and "milk intolerance" are of current interest. Although the intestinal enzyme deficiency appears to have only limited practical significance (7) it should be taken into account in planning feeding programmes involving milk or milk products. Similar questions arise in relation to the inclusion of certain legumes in the diets of young children; it may be necessary to restrict the methods of preparation and limit amounts included in the diet.

Other related policies

Many of the matters discussed here require for their implementation a programme of health education (see Chapter 20); policies on education at many levels must therefore be considered. Social welfare policies are important in so far as they affect accessibility to health, housing, and related services.

Information Required in the Design of Food and Nutrition Policies

Collation of basic information relating to the general characteristics of a country and its resources, the people and their health problems, and existing programmes and policies is essential for the preparation of a food and nutrition policy.

It must be emphasized that collecting and collating information is a continuing process. The initial food and nutrition policy may not be comprehensive; it may be intended to attack outstanding problems. Thus the information required may be limited in scope. Obviously, the data base must be expanded as the policy is extended but it is not necessary to collect all the information before any action is taken; however, provision must be made for the expansion of the data base as well as for the extension and refinement of the policy. Another important reason for regarding data collection as a continuing activity is that the food and nutrition policy must be seen as a dynamic process. Conditions in the country are likely to

undergo continual change and policies must be adapted to meet these changes; new information is therefore needed at all times.

More complete discussions of the various items of information required are to be found in Chapters 11, 12, 13 and 18 and Annexes 3, 4, and 6 (see also references 1, 2, and 3).

A serious question for those involved in the preparation of food and nutrition policies is how such information is to be obtained. Some descriptions suggest that very comprehensive field studies must be undertaken before policy planning is initiated. While this may have major theoretical advantages in the policy planning process, the practical limitations in respect of cost and time are so great that efforts to formulate policies may have been hampered in many areas. Before the need for major field investigations is accepted an attempt must be made to collate the information already available. This may permit the planning process to be started. As planning develops, the need for specific types of additional information should determine whether specific field studies are required. The identification and collection of information and the initiation of field investigations, if they prove necessary, are major day-to-day tasks for those involved in policy planning efforts.

Much information about a country and its problems may already exist in the published literature and in reports to various ministries. In addition, many ministries and institutions collect, or have access to, raw statistical information (production reports, import-export records, hospital statistics, demographic data, manpower records, etc.) that can be analysed to answer important questions. Finally, information obtained from field agencies about the problems observed in the population and the circumstances affecting these problems may be very valuable in the planning process.

If it appears necessary to collect new data in the field on a national or regional basis it is essential to pay very careful attention to the statistical design of the studies in order that the minimum sampling requirements are met. Collecting more data than necessary, as regards either volume or type of data, greatly increases the cost and time required for collection and analysis.

Organizational Setting for the Formulation of Food and Nutrition Policies

Planning for the formulation of a national food and nutrition policy (perhaps better expressed as the coordination and integration of policies influencing the food and nutrition situation) is obviously a complex task. Several sectors of government are involved, and from its inception the planning must be closely integrated with the national development and planning process of the country. The organizational requirements for the planning process depend on the level of planning and the administrative structure of the country. Some broad guidelines are suggested in the following discussion.

On a number of occasions, strong recommendations have been made for a multidisciplinary, interministerial group or commission on food and nutrition policy, closely related to the national planning body. However, the results of these efforts are not encouraging and very few countries have effective food and nutrition commissions. Reasons for the lack of success in this direction were suggested at an FAO technical meeting in 1961 (9) and proposals were made for overcoming the problems. The institutional mechanism for formulating national food and nutrition policies was discussed at an inter-agency meeting in 1973.^a The meeting agreed unanimously that such policy should be developed by the national planning agency in each country as an integral part of the national economic and social development policy.

The structural organization concerned with the formulation of a food and nutrition policy should include three functional groupings: a national food and nutrition planning unit, a decision-making group, and various technical support groups. These are considered briefly below.

National food and nutrition planning unit

This unit should be organized as a part of the national planning body and be independent of any particular sector but responsible to a senior level of the administration. These are important conditions because the unit will be required to work with a number of sectors of government (see Chapter 15) and should not be seen as the instrument of any particular sector. The main function of the unit is to formulate the food and nutrition policy for submission to, and approval by, the political body, following the sequence of steps outlined on p. 432. Since this process involves interdisciplinary and intersectoral activities it would be wise to include in the unit representatives of several disciplines, perhaps specializing in such fields as statistics, agronomy, economics, nutrition, and planning. Technical assistance and advice must be available to the unit and the work should be coordinated with that of planning units in the various ministries concerned with policy implementation.

Decision-making group

It has already been pointed out that food and nutrition policy should not be regarded as detailed proposals for specific programmes but rather as broad policy concerning the effective integration of sectoral policies. The "decision" to be taken is concerned with endorsement of the total approach to the control of nutrition problems (the food and nutrition policy) and usually also to the priorities and general budget allocations for the

^a See footnote a on p. 420.

related policies and programmes of individual ministries. This implies that other aspects of multisectoral activities such as planning for economic and social development will be dealt with in a similar way, that several planning units may exist simultaneously, and that ultimately they all advise the same decision-making group. A distinction is made between the routes of policy development and administrative direction of governmental activities. The need for links between these different aspects of policy making is obvious.

After making an initial analysis of the situation, the food and nutrition planning unit should hold a preliminary consultation at executive level in order to define provisional objectives and goals and to establish priorities. An *ad hoc* committee composed of senior members of the various ministries concerned might be convened to review proposals before a final policy decision is taken by the senior political body (council of ministers, cabinet, prime minister, or president, as the case may be). Although the level of authority responsible for giving final approval to the policy must be clearly defined, the importance of an interministerial review, *ad hoc* or formal, as an intermediate step should not be ignored. Effective cooperation at this level assures the feasibility of implementing the policy. An important requirement in policy planning is compatibility between the proposed policies and existing policies and priorities of the different ministries. The review process allows policy proposals to be modified if necessary before they are presented for final approval.

Once the planning process has started the task of coordinating the activities of the various ministries can probably be carried out mainly at the intermediate level without reference to the senior political body except on major policy matters.

Technical support groups

In many instances, particularly if a well organized national nutrition institute does not exist in the country, the difficulties of maintaining an effective food and nutrition planning unit are due to the lack of technical support. Brief but adequate documentation is needed to provide a firm basis for the decisions to be taken.

In view of the complexity of food and nutrition problems and their intersectoral relationships with respect to determining factors and control programmes it is essential that the food and nutrition policy unit should make the maximum use of the various technical support groups available in the country. Technical resources may be found in institutes of nutrition, agricultural marketing, food technology, statistics, etc., the universities, various ministries, and elsewhere in the country. The Joint FAO/WHO Expert Committee on Nutrition has stated (10), "In some countries, the first step to be taken may well be to establish a technical advisory group from those people currently available with a knowledge of the technical aspects of research and education programmes in the field of nutrition".

The food and nutrition planning unit should establish links with these technical support groups and it is often appropriate to establish *ad hoc* subcommittees to study specific problems. Where there is a strong nutrition institute, this institute can play a key role in providing the necessary technical support. The main responsibilities of the technical support group are to provide all the technical information and expertise that the national food and nutrition planning unit requires for fulfilling its functions.

Technical support groups should include three kinds of advisers.

(1) Nutrition experts, who can participate in the technical aspects of initial diagnosis and in research and education programmes and activities. These experts could include university professors and specialists in nutrition, food technology, statistics, etc., from institutes of nutrition.

(2) Experts in agricultural planning and economy as related to nutrition, who should be mainly agricultural engineers and specialists in economics and marketing.

(3) Experts in the various aspects of nutrition education, who could include university professors and representatives of departments of education, health, primary and secondary education, and agricultural extension services.

Sequential Steps in the Formulation and Implementation of Food and Nutrition Policies

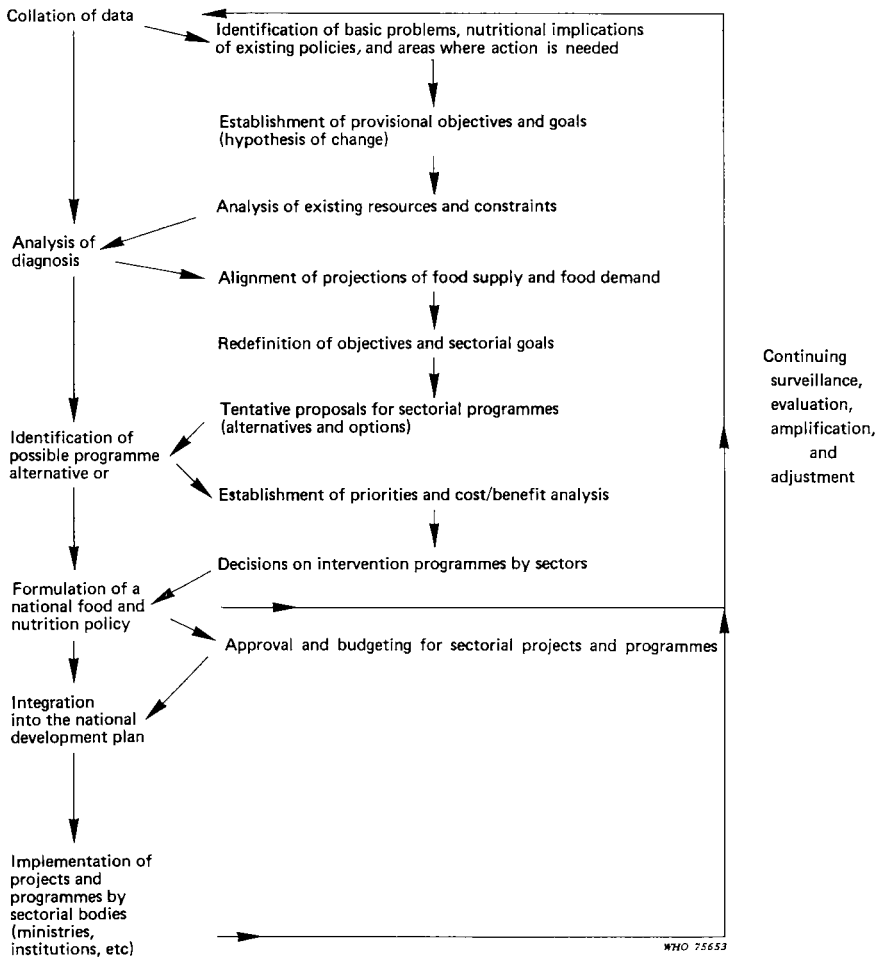
Since different countries have reached various levels of development in the planning process and have different political administrative structures, it is impossible to describe a single intersectoral planning system suitable for all countries. However, the general principles and stages of planning can be outlined here. They are summarized in Fig. 2 and described briefly below.

Collation of basic information

Planning cannot be carried out in isolation or be based solely on opinion. The first step must be to collate all relevant data to obtain a description of the nature, extent, and possible causes of nutritional problems in the population. The types of information needed, and the possible sources of this information, have already been discussed (see p. 428).

The collation of basic data is the responsibility of the food and nutrition planning unit. However, according to the local situation, the various technical support groups in the country should have a significant role to play in this activity. It is important at this time to identify gaps in knowledge that may require further study and research.

Fig. 2. Sequential steps in the formulation and implementation of a food and nutrition policy



Establishment and analysis of diagnosis

On the basis of all the data and information collected, the major food and nutrition problems affecting the different socioeconomic groups of the population will be identified and a judgement made on the conditioning factors against which specific action should be taken. A solid basis for future programme planning is a knowledge of the characteristics, effects, and causes of these problems and the identification of the size and characteristics of the affected population, including the groups that are most vulnerable biologically and socioeconomically.

During an analysis of the prevailing food supply and demand situation and the biological utilization of food in the country, special emphasis should be given to the identification of the resources available for each sector or programme, including national and international financing and unilateral and bilateral assistance.

It should be pointed out, however, that although the analysis of the existing situation will take several sectoral areas of national socioeconomic development into consideration its main purpose is to identify the nutritional implications of existing policies and sectorial programmes related to food and nutrition. This will allow, in turn, the identification of problem areas or gaps that require specific and deliberate action, either a reorientation of current programmes and projects or the implementation of additional activities.

In this way provisional objectives and goals, that is, a preliminary hypothesis of changes that will form a foundation for the rationalization of subsequent planning processes, should be established. A careful examination of existing resources in the light of the provisional goals will help in the identification of obstacles (political, administrative, technical, and financial) to the attainment of the goals.

The establishment and analysis of the diagnosis is the responsibility of the food and nutrition planning unit. However, technical support and sectorial planning groups could help by providing advice.

Identification of possible programme alternatives or options

The establishment and alignment of food demand and supply projections are important activities that will produce realistic estimates adapted to the actual economic situation of the country, the existing possibilities for food production, and the nutritional needs of the whole population. FAO has developed a comprehensive interdisciplinary approach for food planning in which the following topics are considered (2, 11, 12): analysis of food balance sheets; food composition trends; nutritional requirements of population groups; future trends in population growth; purchasing power of various socioeconomic strata; assumptions on income and elasticity of demand; and estimations of food production and intermediate utilization, which include assumptions on investments, yields, and manpower. This scheme permits the projection of food supply and demand with different alternatives.

After the projections and alignment of food supply and demand are completed and specific alternatives selected it is possible to redefine more realistically the objectives and sectoral goals related to food and nutrition within the framework of the current or proposed sectoral plans. These redefinitions form a basis for the formulation of tentative proposals for sectoral programmes and projects and the identification of possible alternatives or options for activities in each sector.

The food and nutrition planning unit has the main responsibility in implementing the sequential activities of this third planning step. However, the unit should work in close cooperation with other sectoral planning units of the national planning body and/or the planning groups of the different ministries involved. On the other hand, since objectives and tentative programme proposals have to be defined, preliminary political participation and guidance in this step will facilitate subsequent decisions in the planning process. This participation could be obtained through interministerial consultations.

Formulation of a food and nutrition policy

Once a series of possible sectoral programme alternatives or options has been identified, it is necessary to select those alternatives that are most likely to be successful in achieving the proposed objectives and can be implemented through existing resources or feasible resource development. Therefore, priorities must be established among the different sectoral alternatives and within sectoral programmes. The probable cost/effectiveness ratios for different action alternatives should be considered as well as the complementary nature of some programmes and projects. The aim of these studies and decisions is finally to select the programme alternatives through which the administration expects to achieve the objectives and goals related to food supply, food demand, and proper biological utilization of food in the country. The national planning body (specifically, the food and nutrition planning unit) plays an important role in this planning step. Programme alternatives are discussed by this unit in close consultation with the planning groups of the various ministries involved and then presented to the decision-making level of administration, usually the cabinet or economic and social council, for consideration and approval. The final decision at the political level determines the nature of the food and nutrition policy to be operated in the country.

Implementation of a national food and nutrition policy

The national food and nutrition policy, as defined at the decision-making level, is reflected in a series of specific programmes and projects that should be approved and incorporated into the different sectoral plans as an integral part of the overall national development plan. Several immediate action programmes with a high priority are palliative in character. However, they are mainly intended to secure the nutritional protection of the most vulnerable groups of the population in a short time in order to avoid further deterioration of the human resources on which future national development depends. Other programmes with medium- and long-term effects are mainly directed towards obtaining favourable and permanent changes in the social

and economic conditioning factors of food and nutrition problems in the country.

The definition of the food and nutrition plan does not automatically ensure that the plan will be implemented. One of the most important requirements for the approval of a plan and its incorporation into the national development plan is adequate financing for all the sectoral programmes and projects envisaged. Funds might be made available from the national budget or through multilateral or bilateral economic assistance. Either way, decisions must be taken and approval given by the different ministries and national planning office, and sometimes specific legislation will be needed.

Implementation of the sectoral programmes and projects

Responsibility for implementing the different sectoral programmes and projects rests with the corresponding sectoral branches of the administration (ministries, institutions, etc.). Some nutrition projects operate under international assistance agreements.

The corresponding sectoral branch should formulate a detailed plan of operation for each programme and project; the plan should include a definition of the problem, a description of the basic situation, the objectives and goals of the project, the main activities to be undertaken and a proposed timetable, the resources committed to the project, the indicators to be used in evaluating activities, objectives, and goals, and the proposed period for the evaluation of results.

It is essential to include a means of assessing intersectoral coordination to ensure that the various programmes encompassed by the national food and nutrition policy are carried out smoothly. Coordination may be achieved at both the central and the provincial or intermediate levels by means of multidisciplinary committees on which the various sectors taking part in the programme are represented. Finally, at the local level, the community must be encouraged to participate actively in groups for coordinating direct food and nutrition intervention programmes.

Evaluation and surveillance of a food and nutrition policy

Evaluation of the different food and nutrition programmes and projects should be based on levels of achievement of their particular objectives and goals during limited periods (see Chapter 15).

Evaluation of the overall national food and nutrition policy is a continuous process that requires periodic assessment of the efforts made in the implementation of programmes, projects, and activities, the operational obstacles encountered, and the changes or results obtained. This evaluation will allow necessary programme adjustments to be made, policies to be

reformulated, and plans made for the next programme period. A co-ordinated system of individual evaluations, with specific indicators for each area concerned, should be established to deal with the different components of national food and nutrition policy. However, it is often difficult to associate the results obtained with specific actions on account of the complex interrelationships of programme activities.

Preventive nutritional surveillance is a new concept that should also be introduced in the evaluation scheme. A national food and nutrition policy should include a flexible system for detecting, at the earliest stage possible, any risk of deterioration in the nutritional status of the population. Some of these risks may be unpredictable but many of them can be predicted and sometimes avoided. A series of indicators of climatic, economic, agricultural, social, and health changes should be selected in order to maintain a continuous system of preventive nutritional surveillance that includes "alert signs" for early warning. So far, little experience has been obtained with nutritional surveillance systems and research in this field is needed urgently.

Special Responsibilities of the Health Sector in the Planning and Implementation of Food and Nutrition Policies

The health sector at all levels should accept a major responsibility for gathering and disseminating information about the nature and magnitude of nutrition problems in the country, their determining factors, and their unfavourable effects upon the most vulnerable groups in the population. The need for this activity as a part of the planning process is self-evident. However, this type of action by the health sector may be necessary to call attention to the need for a national nutrition policy, and it will therefore often precede the planning process.

Facts about the nutritional situation should be presented to the public and the politicians, including those at the highest levels of executive authority. The facts should be presented objectively but clearly and be supported by statistical data, pictorial illustrations, and whenever possible by charts showing changes and trends. The intention is to provide healthy motivation for increased and clearly defined efforts to control nutritional problems, not to create panic or develop poorly conceived programmes. In a number of countries a direct approach to the highest national policy-making bodies has achieved an increased allocation of resources, both economic and technical, for nutrition programmes. The policy-making bodies and the general public must be well informed and motivated to favour the strengthening of nutrition-oriented programmes. Health workers at all levels have a major responsibility for assembling and disseminating this information.

The health sector, in cooperation with the agricultural and other sectors, has a clear responsibility in the planning and formulation of a national food

and nutrition policy. In particular, the health sector will be expected to assume major or total responsibility for compiling information about the nature and extent of nutritional problems affecting health. This task may range from collecting information about morbidity and mortality as indicators of the nutritional situation to conducting clinical examinations and/or dietary studies in the field or even conducting more comprehensive nutrition surveys (see Annex 6). It has already been emphasized that the kinds and quality of data to be collected must be carefully considered. Sound decisions may be possible with only general information for certain problems and in certain situations. The health sector will continue to be involved in the evaluation of programmes and the monitoring of health and nutrition conditions in the country.

The health sector and its individual agencies must assume major responsibilities for the conduct of a number of programmes aimed at controlling malnutrition. Whether or not a formal intersectoral food and nutrition policy exists, it will still be necessary to formulate a sectoral nutrition policy *within* the health ministry to permit the assignment of responsibilities for particular programmes and actions to the various levels of government—central, intermediate, and local.

Nutrition activities at the central level

The health ministry, and in some countries the national institute of nutrition, is responsible for the implementation of the health sections of a national nutrition programme. Within the health ministry there is generally a nutrition unit responsible for corresponding activities at the central level.

The nutrition unit should participate with other units of the health ministry—namely, maternal and child health, health education, communicable diseases, and environmental sanitation—in planning and coordinating the preventive programmes of the different types of health service: hospitals, health centres, health posts, nutrition education and rehabilitation centres, baby clinics, nurseries, and school health services.

The main responsibilities may be summarized as follows.

Collection and analysis of data related to nutrition

The activities in this area include collecting and updating vital statistics and nutrition survey data in order to establish the baseline situation for nutrition programmes; establishing a system for periodic surveillance of the nutritional status of the population; giving advice about norms for diagnosis and reporting on deficiency diseases; and assembling and updating information about institutional and technical resources for nutrition programmes to be developed by the health services.

Establishment of regulations and norms

The regulations and norms approved and adopted by the health ministry, with, in some cases, the technical assistance of the institute of nutrition, are related to dietary allowances for individuals and groups; food standards, food hygiene, and quality control; recommendations for the prevention and treatment of specific deficiency diseases; guidelines for the organization and operation of different types of local health services such as nutrition education and recuperation services, food demonstration units, hospitals and industrial food services, nutrition education, and supplementary feeding in health centres, schools, kindergartens, and other types of institution; and legislation related to food fortification with certain nutrients such as the iodization of salt, the fortification of bread or milk with vitamins and minerals, and the fortification of cereal products with amino acids.

In the area of nutrition education the recommendations and norms relate to nutrition teaching in schools of medicine, nursing, nutrition and dietetics, dentistry, veterinary science, agronomy, and educational sciences, and also in schools for auxiliary nurses, primary and secondary school teachers, health promoters, home economists, agricultural extension workers and similar personnel, and to the establishment and official adoption of guidelines for food and nutrition teaching in primary and secondary schools and educational programmes for different community groups (mothers, agricultural and industrial workers, etc.).

Implementation of specific aspects of nutrition programmes

Although it is generally accepted that the implementation of nutrition programmes is not the responsibility of the administration at the national level, certain parts of a programme could be carried out at the central level; these include administration of the different types of technical, economic, or food aid assistance from multilateral or bilateral agencies and the subsequent control of the food supplies used by the intermediate level or local services responsible for specific nutrition projects; the development of nutrition education programmes for the whole country through the mass media (press, radio, television); and the elaboration, printing, and wide distribution of educational material on food and nutrition for local use in community projects. The introduction and control of food fortification programmes could also be carried out at the central level of administration.

Consultation services, supervision, and evaluation

It is worth pointing out that, since food and nutrition programmes are multisectoral in character, the experts in different disciplines who collaborate in formulating a national nutrition policy could provide advice and consultation services for experts in the other sectors, thereby establishing a very useful and productive association within the programme. In fact,

these services would provide an excellent opportunity for the nutrition unit to inform government officers belonging to different sectors about the importance of nutrition programmes in the context of national plans for economic and social development and thereby improve their motivation with respect to the nutrition policy.

The nutrition unit and/or the institute of nutrition could also offer, at the request of governmental and private bodies, consultative services on various aspects of food and nutrition such as training programmes for sub-professional personnel; the organization and operation of different types of food services, industrial cafeterias, supplementary feeding, and nutrition education programmes for the community; special rations for military personnel; and menus for different types of institution and community groups.

The supervision and evaluation at the national level of specific details of nutrition programme operation should be carried out by officers of the various institutions coordinated through the national nutrition programme, according to the structure and procedure established for each institution.

Nutrition activities at the intermediate or state level ^a

The intermediate level of administration generally reproduces, on a smaller scale, the activities undertaken at the national level in relation to the different sectoral responsibilities. In small countries there may be no distinct intermediate level of administration but in this chapter it is assumed that the intermediate level represents a state in a federal or similar political structure. Although this level is basically responsible for the administration of programmes and their executive direction, it has also a defined function to formulate and coordinate the nutrition programme for the state.

Planning and coordination with other sectors

The comments on planning and coordination at the national level are valid at the intermediate level also. It is therefore desirable to organize at this level an intersectoral coordinating committee on nutrition, preferably within the structure of the state government and with the participation of other semiofficial or private bodies. This approach permits maximum use to be made of existing administrative structures and the coordination of their technical and economic resources.

The main responsibilities of an intersectoral coordinating committee on nutrition, whose organization, coordination, and operation are generally

^a A WHO expert committee (13) has defined the intermediate level as "A politically endorsed entity, state, region, province, or district, that is capable, in terms of its resources (actual or potential), of managing a comprehensive health programme within its geographical boundaries, and to which adequate executive authority can be granted for this purpose", and an intermediate health administration as "a body that administers and supervises the services of a number of local health areas. Within this definition several organizational and functional types of intermediate health services may be found. There may be more than one intermediate health service between the local and central health authorities. The regional health administration is one example of an intermediate health service."

promoted by the state health service, are to study and approve the nutrition programme for the state. This committee, as part of the state government, allocates the basic budget for the nutrition programme.

Administrative and executive direction

At the intermediate level in different countries there are structures and agencies of various types in programmes related to food and nutrition. Although it is possible to describe the most usual arrangements, each country has its own special characteristics.

In the health sector there is usually a state or regional health service whose general structure is similar to that of the health ministry although its responsibility is limited to a specific geographical area. The state or regional health service adapts and applies the norms and regulations established at the national level. Its responsibilities include both preventive and curative activities carried out through different types of health service such as health centres, hospitals, nutritional recuperation services, and health posts.

The state or regional health service is usually responsible for the general administration of health districts, which may include a number of local health units. The functions of a state or regional health service can be summarized as follows:

- (1) planning, organizing, and directing the health services within the general policy laid down in the national health plan, including the coordination of programmes and establishment of health priorities in the state or region;
- (2) making epidemiological studies and analysing regional data;
- (3) arranging in-service training for health personnel of the region;
- (4) providing consultation services and supervising and evaluating the activities of health districts;
- (5) coordinating intersectoral collaboration with governmental and private or voluntary organizations.

Of these functions, those that are related to the nutrition programme are carried out by one or more public health physicians specializing in nutrition and/or by nonmedical nutritionist-dietitians. Since the nutrition activities are an integral part of the state health programme, and are developed at the local level by the different members of the health team, the supervision and evaluation of these specific activities are also responsibilities of the state health service.

Nutrition activities at the local health service level

Ultimately, the operational level of most nutrition intervention programmes is that of the local health services. Through these services the community receives direct attention from professional and auxiliary personnel who have the responsibility of carrying out the various programme activities. The basic operational health unit includes health centres and health posts or dispensaries, which offer specified services and are provided with appropriate technical resources.

The nutrition activities to be carried out by the local health services relate to the diagnosis of the problem at the community or the individual level, the promotion of good nutritional standards, the provision of specific protection against nutritional diseases, and the treatment of deficiency diseases. A PAHO/WHO study has been made of these activities (8), details of which are discussed in previous chapters.

Most of the activities, including promotional programmes, should be integrated with the basic health services or with certain specialized services, particularly maternal and child health care. A brief account of the broad categories of activity is given below.

Activities related to nutrition surveillance of individuals, families, and communities

Surveillance activities can be of three different kinds:

(1) Prediction of a sudden deterioration in the nutrition situation in the community so that preventive measures can be taken. Predictive surveillance can be based on simple indicators, not necessarily on anthropometric data but on climatic, socioeconomic, epidemiological, and agricultural information.

(2) Early detection of a deterioration in the nutritional status of individuals to allow appropriate remedial measures to be instituted. This type of surveillance is usually based on anthropometric and clinical data—growth charts for infants and young children, for example.

(3) Monitoring of community studies through anthropometric and vital statistics data to enable long-term planning to be made for policies related to food production and distribution and to the health services (see Chapter 18 and Annexes 3 and 4).

Activities related to the control of infections and infestations, particularly through immunization, and control of diarrhoea

This is a valuable form of indirect nutrition intervention. Since the control of communicable diseases has high priority in all the developing countries this measure has great potential (see Chapters 14 and 19).

Supplementary feeding programmes for the nutritional protection of the malnourished population at risk, especially infants, young children, and pregnant and lactating women

Feeding programmes for preschool children and school meals programmes are good examples. The distribution of nutrients such as iron and vitamin A in mass prophylaxis campaigns against specific deficiencies are also included in this category. Vitamin A supplementation has acquired considerable prominence in recent years as a national programme for the control of xerophthalmia (see Chapters 21 and 22).

Nutrition education

Nutrition education, especially for women, can significantly improve nutritional status, particularly that of young children in the weaning and post-weaning periods. The promotion of breast feeding and correct weaning practices are two areas where nutrition education can have a considerable effect. In providing this education the health sector has special advantages in the form of a suitable infrastructure (health centres, etc.) and a well motivated audience, e.g., mothers with sick children (see Chapter 20).

Coordination and collaboration with other community workers (particularly agricultural extension workers, home economists, and teachers) in order to effectively implement multisectoral nutrition programmes in the community

The applied nutrition programmes being conducted in many of the developing countries are examples of a nutrition programme that requires close coordination between the agricultural, health, and education sectors (4). It should be pointed out, however, that the planning of realistic and effective nutrition activities within material and child health programmes in developing countries should be based on three elements: (1) the strengthening and expansion of the basic infrastructure of maternal and child health services for the community; (2) the training and organization of a key team of nutrition workers under a strong leadership; and (3) the active participation of the community in the programme.

At the local level, health orientated nutrition activities should be coordinated with those in the education and agricultural sectors. Health personnel often have an advisory role in school nutrition programmes—the teaching of basic concepts of food and nutrition in primary and secondary schools, the operation of school meals programmes, and the establishment of school gardens. The agricultural sector, through agricultural extension services, will relate to the school nutrition programme and to the nutrition education activities within the health sector. For maximum effectiveness the work of the two sectors should be fully coordinated, but it is sometimes difficult to achieve this in practice.

The importance of community participation in the planning and organization of local services must not be overlooked. An appreciation of the “felt”, as well as the “real”, needs of the community can improve the acceptance and effectiveness of nutrition programmes. This can sometimes be achieved by formal or informal committees that include community leaders; more often it can be achieved through simple informal contacts between the programme medical officers and community leaders.

Finally, the feasibility of implementing a national food and nutrition policy depends to a great extent on ideas, initiatives, and circumstances at the community level.

REFERENCES

1. BERG, A. & MUSCAT, R. Nutrition program planning. An approach. *In: Proceedings of an International Conference on Nutrition, National Development, and Planning*. Cambridge, MA & London, MIT Press, 1971
2. JOHNSTON, B.F. & GREAVES, J.P. *Manual on food and nutrition policy*. Rome, Food and Agriculture Organization, 1969 (FAO Nutritional Studies No. 22)
3. *Elements of a food and nutrition policy in Latin America; report of a Technical Group Meeting*. Washington, DC, Pan American Health Organization, 1970 (PAHO Scientific Publication No. 194)
4. WHO Technical Report Series, No. 340, 1966 (Report of a Joint FAO/WHO Technical Meeting on Methods of Planning and Evaluation in Applied Nutrition Programmes)
5. WHO Technical Report Series, No. 477, 1971 (Eighth Report of the Joint FAO/WHO Expert Committee on Nutrition)
6. *Guidelines for food fortification in Latin America and the Caribbean; report of a PAHO Technical Group Meeting*. Washington, DC, Pan American Health Organization, 1972 (PAHO Scientific Publication No. 240)
7. PROTEIN ADVISORY GROUP OF THE UNITED NATIONS SYSTEM. *Ad Hoc Working Group on Milk Intolerance; nutritional implications*. *PAG Bulletin* 2 (2): 7 (1972)
8. *Actividades de nutrición en el nivel local de un servicio general de salud*. Washington, DC, Pan American Health Organization, 1969 (PAHO Scientific Publication No. 179)
9. *Report of the Technical Meeting on Nutrition in Food Policy and Planning in Asia and the Far East, Bangkok, June 1960*. Rome, Food and Agriculture Organization, 1961 (FAO Nutrition Meetings Reports Series, No. 28)
10. WHO Technical Report Series, No. 245, 1962 (Sixth report of the Joint FAO/WHO Expert Committee on Nutrition)
11. PÉRISSE, J. The nutritional approach in food policy planning. *FAO Nutrition Newsletter*, 1 (6): 30-45 (1968)
12. FOOD AND AGRICULTURE ORGANIZATION. Formulation of food and nutrition policies. *FAO Nutrition Newsletter*, 10 (2): 1-13 (1972)
13. WHO Technical Report Series, No. 499, 1972 (Report of a WHO Expert Committee on the Organization of Local and Intermediate Health Administrations)