

European food and nutrition policies in action



WHO Regional Publications
European Series, No. 73

World Health Organization
Regional Office for Europe
Copenhagen



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Foreword

This is the third in a series of publications initiated by the former Regional Adviser for Nutrition, Dr Elisabet Helsing. The first, Healthy nutrition: preventing nutrition-related diseases in Europe (WHO Regional Publications, European Series, No. 24), describes the need to consider nutrition in the development of food policies. The second, Food and health data: their use in nutrition policy-making (WHO Regional Publications, European Series, No. 34), is designed to help set objectives for policy-makers and their technical advisers

This publication describes the experiences of the Member States of the WHO European Region that were among the first to develop food and nutrition policies as part of the regional strategy for health for all. Although based mainly on experience and work in the 1980s, the book remains strategically, historically and developmentally important. For example, a critical analysis – reported here for the first time – was carried out in several Scandinavian countries to investigate the determining influences, the key interests and the barriers encountered during the development of nutrition policies. This analysis illustrates the learning process that the proponents of food and health policy have to go through in order to realize that food may be more about economics than health.

Food economics has always tended to be a battleground, and the situation today is no exception. With the competing interests of producers, processors, wholesalers, retailers, caterers and consumers, the public health aspects can easily become forgotten or marginalized. Unless the proponents of public health present coherent, evidence-based arguments and have clear strategic goals, the long-term interests of the 850 million citizens of the WHO European Region may be compromised. Food and health policy-makers may be given less than their due attention by key decision-makers, who are understandably preoccupied with economic and trade issues. This publication provides important evidence of how

Member States are beginning to integrate food issues into health planning, but there is no room for complacency.

The past 20 years have seen unprecedented changes in the availability of and access to food, especially in western Europe. One major change is the year-round variety of foods now available from all corners of the world, due largely to improvements in distribution, which would have been unthinkable to earlier generations. Second, large retail outlets are emerging as the key – and arguably the dominant – force in the world of food and health policy, and proponents of public health must therefore try to influence the types of food available through these outlets. Third, the application of biotechnology and the arrival of novel foods suggest that there will be no let-up in the speed and scale of change. Finally, eastern and southern European countries are increasingly being introduced to systems of production and distribution hitherto the preserve of northern and western Europe.

This can be illustrated as much by the fragmentation within these societies as by differences between the countries. Thus, along with apparent industrial and economic progress, new forms of food poverty and poor nutrition are emerging throughout Europe. Current changes bring new opportunities but also new threats to public health, and so a fresh look at policy analysis and better intersectoral collaboration are needed to enable us to understand their likely impact on public health.

A public health perspective on food demands constant vigilance. Technologists, food economists and business people need to be encouraged to consider the long-term health and environmental implications of their plans for the food economy of the twenty-first century. With people everywhere being encouraged to be more conscious of their health and of the need to promote environmentally friendly systems of production, advocates of public health and those promoting a more sustainable food economy may find they have a common cause. In the coming years, wider environmental considerations are certain to play a more central role in European food, agricultural and health policies.

This publication is a testament to the rapid development of European food policy. It illustrates how nutrition has managed, often with great difficulty, to arrive on national political agendas. The examples given will provide readers with a useful historical perspective on how food and nutrition policy emerged at the end of the twentieth century. In addition, some of the lessons learned have been preserved to furnish useful guidance for the future.

Even before this book was published, the impact of globalization and the changing trade environment (the General Agreement on Tariffs and Trade, GATT, has been transformed into the World Trade Organization) had forced a rethinking of food and nutrition policies within the European health for all strategy. So-called “barriers to trade” may in

fact provide a safeguard against threats to the environment and public health. Their removal, and the resulting free trade, are likely to have a major impact on food security throughout the world. Already we see a widening gap between the rich and poor in Europe, an issue much discussed at the World Food Summit in Rome in November 1996. If this gap continues to grow, or even if it stabilizes, there are likely to be adverse effects on public health, either directly through changes in policy or indirectly through alterations in job security, earnings and conditions of work.

Another example of a new challenge is the changing urban–rural mix in Europe. As the rate of urbanization accelerates, more and more rural jobs will disappear and farmland will be either set aside or taken over for business-style farming. Such intensive use of the land demands monocultural production to the detriment of biodiversity, ecology and the environment. This may lead to cheaper food in the short term, but paradoxically may eventually have negative implications for locally produced foods, job security and the whole fabric of local rural society. Europeans may become more urbanized, have less access to foods rich in nutrients and be less physically active. If these trends continue, they will undermine the provisions of target 16 of the health for all strategy, that there should be “continuous efforts in all Member States to actively promote and support healthy patterns of living through balanced nutrition, appropriate physical activity and other aspects of positive health behaviour”.

Although in general food production is tending to intensify, there are nevertheless signs of moves (both by governments and through consumer demand) to encourage a return to less intensive methods. Some farmers are developing low input – low output systems, by which lower yields are accepted as the price for not polluting the land with fertilizers and pesticides. In some western European countries, “organic” systems are gaining a significant share of the market. Thus there is a continuing battle for political influence between the supporters of small-scale farming and rural economies on the one hand and proponents of more intensive, large-scale production on the other.

Small-scale farming is still the norm in much of southern, central and eastern Europe and, as the World Bank and others have stressed, there is much to be learned from the dacha system in the Russian Federation. Under this system, people own or have access to land outside the towns where they can cultivate and store their own fruit and vegetables, thus ensuring food security for a large proportion of the population. Also, in some Russian schools, as part of the normal curriculum, children are taught from a very early age how to plant, grow, harvest, preserve and prepare food. While the trend is to increase food production on a global scale, there are good environmental and health reasons

for building, maintaining and protecting local production and distribution systems.

The arrival of such debates in modern food and health policy, only a few years after the period that shaped the content of this publication, reminds us that better exchange of ideas and experience in Europe can play a vital role in building a modern public health approach to food. They are a sign of the success of the pioneering work set out in this volume.

Policy-makers should have the opportunity to compare their own national situations with the European developments described in this publication, and to identify the issues that will have to be considered in the future. The next Regional Office publication on food policy, the fourth in this series, will address some of the issues raised that will require the attention of food and health policy-makers and nutritionists to ensure public health after the year 2000.

J.E. Asvall
*WHO Regional Director
for Europe*

Introduction

Nutrition is the bridge between agriculture and health. Unfortunately the science of nutrition is young, nutrition scientists are few and training possibilities in the WHO European Region are limited, especially in the south and east. There is a struggle for recognition, for definition of criteria of competence, and for delineation of areas of responsibility. The subspecialty of public health nutrition is even less visible, with few people qualified in this field. This is unfortunate, since food production – one of the largest commercial sectors in Europe – is currently being restructured, especially in eastern Europe, and this is bound to influence the opportunities for better health in the Region as a whole.

Awareness of the interdependence between the agricultural and health sectors has varied in the past. As will be seen below, it was recognized following the food shortages of the Second World War and resulted in a greater willingness to consider nutrition when planning food production. Later, however, the agricultural sector became divorced from the health sector, leading to a tendency for food policy decisions affecting the nutritional status of millions to be made without any contribution from those who knew about the potential effects on health of those decisions. This was not due to a lack of long-term planning; the effects of food policy on, for example, trade and employment are usually carefully considered. The gap between the departments of agriculture and health, however, often seemed difficult to bridge. There is nevertheless hope that, with more consumer concern about food and health, common interests will bring these sectors together again.

Agriculture and health in the United Nations system

When the United Nations was created, agriculture and health were seen as interdependent. Responsibility for nutrition was shared between the

Food and Agriculture Organization of the United Nations (FAO), which was set up in 1943, and WHO, which was created in 1948. The two organizations initially divided the areas of responsibility thus (1):

In FAO the emphasis is on nutrition in relation to the production, distribution, and consumption of food; in WHO it is on nutrition in relation to the maintenance of health and the prevention of disease.

The nature of nutrition problems

Nutrition problems may, very crudely, be classified as those caused by either deficiency of nutrients or by excess or imbalance among nutrients. Deficiency syndromes are the best known, since the science of nutrition originated with the discovery of essential nutrients (those that lead to illness if not supplied by the diet) such as the various vitamins and essential amino acids. Diseases caused by an excessive intake of nutrients caught the attention of researchers much later. These problems became more widely known only in the 1950s through the work of Ancel Keys and others, who were trying to understand the origins of the heart disease epidemic that had struck the United States even before the Second World War and that later appeared in Europe. These studies were initially received with interest but, in contrast to the interest generated by deficiency diseases, there was a certain resentment against the idea that too much of a nutrient might be bad for health.

The development of this resentment was reflected very precisely in the activities of the two United Nations organizations. In its first reports on nutrition, the Joint FAO/WHO Expert Committee on Nutrition addressed “nutrition and degenerative diseases”. High-fat diets were clearly under suspicion as the possible cause of these diseases (2). The report on the second session of the Committee, held in Rome in 1951 (3), stated that:

... there is also reason to suppose that excessive consumption of carbohydrates and fats, quite apart from calories, may produce serious forms of malnutrition. While these are rare in many parts of the world, they may be of outstanding importance in regions in which food supplies are abundant and economic levels high. The association of obesity with a high incidence of ‘degenerative’ diseases, e.g., certain cardiovascular and metabolic disorders, suggests that in these regions malnutrition from the over-consumption of food is a problem of major significance.

It did not take either nutritionists or food producers long to realize what this might mean in terms of food, and of the potential loss of economic growth in certain food-producing sectors.

The Committee's reports in the period 1955–1962 reflect a slow change of emphasis away from the uncomfortable link between fat and disease towards the assertion of a need to “bridge the protein gap” and the production of high-protein foods. The “diet–degenerative diseases” link was dealt a final blow when, in 1962, WHO called an expert consultation of cardiologists with the mandate to study the possibilities of preventing ischaemic heart disease (4). The Committee report stated *inter alia*:

It must be repeated that at the present time there are no effective means by which the occurrence of ischaemic heart disease can be prevented. Such therapeutic measures as are available must therefore be applied to the disease itself in the hope of delaying its progression or preventing late complications. ... Nevertheless, much further research is needed before public health authorities can recommend major alterations in the diet, or are justified in advising that more or less of any particular kind of fat would be beneficial.

This verdict established the direction of nutrition research for many years to come. For four years the Expert Committee was not even convened. When it finally met again in 1966, its members seemed to have got the message: their concern was mainly about deficiencies and undernutrition, and all they had to say about nutrition and degenerative diseases was that the relationship between nutrition and atherosclerosis was “currently an area of intensive inquiry” (5). The overall impression is that the 1962 statement discouraged the United Nations agencies from further pursuing the heart–health theory. In the following decades FAO continued to concentrate almost wholly on the question of protein deficiency diseases afflicting the poor and undernourished.

Unfortunately, it seems that this attitude was further reflected in the global discussion among nutrition scientists. Except in the Nordic countries, on the periphery of Europe, and the United States, from whence the theory had originally emanated, nutritionists again turned their attention to deficiency diseases. These were far less politically sensitive; the prospect of having to add nutrients to food, or to distribute supplements to certain groups of people, is clearly commercially attractive and elicits no opposition from the food industry.

Nutrition policy, likewise, was seen as appropriate only for tackling the problems of deficiencies. Immediately following the Second World War, documents from FAO described various steps to be taken towards formulating a comprehensive food and nutrition policy. During the 1960s the emphasis changed towards a call for nutrition to be made part of overall development policies (6), the underlying assumption being that countries that were already developed did not need nutrition policies.

In the 1970s, however, the Nordic countries again managed to bring nutrition science one step closer to action. Owing to joint Nordic lobbying during the 1974 World Food Conference, the final resolutions stressed that national food and nutrition policies were relevant for all countries and all forms of malnutrition. Norway even put this pronouncement into practice in 1975 by announcing the adoption of a national food supply and nutrition policy (7). Similar action followed in the 1980s from the other Nordic countries and from Malta (Annex 2) and the Netherlands. In the 1990s formal nutrition policies, adopted by parliament or government and thus given a political mandate, were introduced in a number of countries including the United Kingdom (see Annex 4).

In central and eastern Europe, nutrition policy initiatives were adopted from time to time, for example in Romania, but these had little real impact on agricultural production or food manufacturing strategies.

In the late 1980s and early 1990s attitudes, including those of WHO, changed profoundly towards the question of a relationship between diet and health. Recent expert committee meetings, such as those on the prevention of hypertension (8) and cardiovascular diseases (9), expressed no reservations about the importance of altering diet and other aspects of lifestyle to prevent diseases.

Fuller descriptions of current knowledge about the relationship between diet and health can be found in a publication of the WHO Regional Office for Europe issued in 1988 (10), and in the landmark report of a WHO Study Group (11), which reviewed the practical implications of this knowledge.

The approach of this book

Seen in historical perspective, therefore, this book represents another step forward in public health nutrition. This publication presents a vast array of experience, insight and points of view on current issues in food and nutrition policy-making across Europe. These problems, activities and hopes are among the most important that will occupy decision-makers and the public alike as they take part in the process of defining the new Europe of the next century.

The book addresses a wide audience: policy-makers and leaders in industry, agriculture, health, education, the environment, consumer affairs and the media, and indeed anybody who may be interested. Its purpose is to acquaint readers with the experiences and lessons to be learned from other countries, and to encourage thoughtful discussion about what the rapidly changing context of Europe means for the nutrition and health of all Europeans, whose wellbeing is now more than ever interdependent.

The material is presented in two main parts. The first discusses food and nutrition issues from several points of view in the new environment in Europe. The second comprises specific case studies and progress reports on nutrition policy-making from countries throughout the Region – north, south, east and west. A final chapter looks to the future, noting some of the lessons of the past and plans for the new millennium.

As used here, the terms nutrient recommendations or dietary reference values refer to recommendations made by national health authorities or their appointed experts to indicate the desirable macronutrient (fat, fibre, etc.) and micronutrient intakes of different, defined population groups. The term dietary guidelines refers to advice based on such nutrient recommendations or reference values, given to consumers in plain language and identifying eating patterns or common types of food that will lead to a healthier national diet (such as eating more, and more high-fibre, bread). The recommendations on nutrient levels that underlie the new nutrition paradigm or, as Milio simply says later, the new nutrition are expressed in Table 1. This marks a shift away from seeing micronutrient deficiencies as the main threat to public health, to regarding the relationship between disease and too high an intake of certain nutrients as the main problem.

Food is big business. The industry is huge, involving a multitude of interests from producer to consumer. Food is therefore also one of the greatest contemporary actors on the political stage. “Agribusiness”, multinational retail chains and the tearing down of trade barriers all contribute to a continuing change in eating patterns. The globalization of food sources means that most Europeans can now eat practically any food item all year round.

Such manifestations of apparent progress, however, also carry a danger – that of masking the social and public health implications. The disappearance of small-scale farming results in greater urbanization and the erosion of rural jobs, with serious effects on locally produced foods and the fabric of rural society. Novel foods created through biotechnology may not necessarily be better in nutritional terms, and can often mislead people into assuming that they are eating well when a traditional diet would be more healthy. Thus the pioneering policy developments described in this book are only a beginning. The challenge is to build on them to ensure a stable and healthy food supply for the future through the further integration of nutritional and public health considerations into national food policies.

Most of the material in this book has been extracted from papers prepared for the First and Second European Conferences on Food and Nutrition Policy held, respectively, in Budapest in October 1990 and in The Hague in April 1992. Case studies prepared for the International

Table 1. Population nutrient goals^a

| | Average population intake | |
|--|--|-----------------|
| | Lower limit | Upper limit |
| Percentage of total energy derived from: | | |
| total fat | 15 | 30 ^b |
| saturated fatty acids | 0 | 10 |
| polyunsaturated fatty acids | 3 | 7 |
| total carbohydrate | 55 | 75 |
| complex carbohydrates ^c | 50 | 70 |
| free sugars ^e | 0 | 10 |
| protein | 10 | 15 |
| Dietary cholesterol (mg/day) | 0 | 300 |
| Dietary fibre (g/day): ^d | | |
| as non-starch polysaccharides (NSP) | 16 | 24 |
| as total dietary fibre | 27 | 40 |
| Salt (g/day) | — ^f | 6 |
| Total energy | Energy intake needs to be sufficient to allow for normal childhood growth, the needs of pregnancy and lactation, and work and desirable physical activity, and to maintain appropriate body reserves of energy in children and adults. Adult populations on average should have a body-mass index (BMI) of 20–22 (BMI = body mass in kg/(height in metres) ²). | |

^a The lower limit defines the minimum intake needed to prevent deficiency diseases, while the upper limit expresses the maximum intake compatible with the prevention of chronic diseases.

^b An interim goal for countries with high fat intakes; further benefits would be expected by reducing fat intake towards 15% of total energy.

^c A daily minimum intake of 400 g of vegetables and fruit, including at least 30 g of pulses, nuts and seeds, should contribute to this component.

^d Dietary fibre includes the non-starch polysaccharides (NSP), the goals for which are based on NSP obtained from mixed food sources. Since the definition and measurement of dietary fibre remain uncertain, the goals for total dietary fibre have been estimated from the NSP values.

^e These sugars include monosaccharides, disaccharides and other short-chain sugars extracted from carbohydrates by refining. These refined or purified sugars do not include the natural sugars consumed when eating fruit and vegetables or drinking milk.

^f Not defined.

Source: World Health Organization (11).

Conference on Nutrition held in Rome in December 1992 are the basis for the descriptions of the current situation given in the case studies and progress reports in Part II.

The bringing of this information together in one volume demonstrates the wide array of experiences currently available on nutrition policy-making in Europe. The extraordinary breadth of the area of nutrition also becomes clear from the documentation, which covers medical science, behavioural studies and agriculture, as well as modern food technology.

Further, in addition to the historical experiences described here and elsewhere in the publication, much effort went into bringing nutrition on to the political agenda in the short period from the middle of 1990 to the end of 1992. This resulted in a lot of good work being done in a very short time, and this deserves to be chronicled.

Part I

Issues in the context of the new Europe

Part I introduces the concept of food and nutrition policy and the context in which its variations are developing in the European Region. The complex issues involved in policy-making are discussed from various points of view.

First, the possibilities and challenges for food and nutrition policies in Europe's changing environment are discussed, showing how the globalization of food and diet and changing patterns of nutrition call for policy measures that encourage new directions for agriculture, industry, the health sector and consumers in order to provide healthy choices of food in all parts of the Region. Following a historical overview of changes in agriculture and their implications for food and nutrition policy, the views of people involved in these policies in various ways are presented, as expressed during the First European Conference on Food and Nutrition Policy in Budapest in 1990 (see Annex 3).

Shaping food and nutrition policy in the new Europe

Nancy Milio

Events in Europe are like a drama on a giant stage that is being written as it happens. It has no predetermined end. It involves many subtle themes and plays to many audiences with different interests both within and outside Europe. It is thus important to state clearly what the themes and actions of the new Europe will mean to the different audiences, to individuals, to businesses and to governments.

One such underlying theme, which is neither dramatic nor very visible but is shaping the story, is health. Health goes beyond the interests of individuals. It is important to employers, who want a productive, mature workforce; to governments, which want their limited budgets to support productive capacity, not services to cope with premature chronic disease; and to society as a whole, which needs an able, not disabled, aging population. Thus many audiences hope the story of Europe will turn out to include health for all.

Yet health will not just happen; neither can it be for all without collective measures to move social action in the desired direction. It will not be enough to relabel the old health policies "health for all" policies. More specifically, as one of the essential components of any aspiration to health for all, food and nutrition policy requires more than just the recodification of food law or the provision of nutrition education.

Now is the moment to address this issue, this subplot, in the European drama; the new market place is unfolding, agricultural methods are changing, joint food manufacturing and marketing ventures are being formed, new avenues of advertising are being opened up and new rules are being set. If the new Europe does not at the same time explicitly create a new nutrition, its story may soon show that the south took on the burdensome chronic disease pattern of the north and the east exacerbated the errors in food production already made by the west.

Policy elements

National food and nutrition policies are necessary to sustain the new nutrition: national diets low in fatty animal products, sugar, salt and alcohol; and high in fibre and plant foods. And the new nutrition – which at its best is a return to food patterns that have been shown to be linked with good health – is fundamental to sustainable health and agriculture. To be effective, it requires more than a reliance on a choice of healthy food at the point of purchase. More important are health promoting decisions by policy-makers, farming organizations, food corporations, retailers, advertisers and educators. Their decisions create the possibility of choice for consumers in food shops, restaurants, workplace canteens and institutional catering.

Policies to sustain a new nutrition must therefore be broad enough to encompass these areas, and to provide a suitable package of inducements and controls to shift decisions towards a healthy national diet. Care must be taken to avoid economic loss and to compensate groups such as small farmers who may not have alternative economic options. A food and nutrition policy will thus have to address issues beyond traditional health interests and include agriculture and fisheries, the environment, rural development, food manufacture and foreign trade. It may selectively apply policy instruments such as economic subsidies and taxes, regulation of food standards, labelling and advertising, provision of direct services (such as nutrition counselling, meals-on-wheels and mass catering), training and education of personnel and the public, and research on and evaluation of consumer and organizational behaviour.

The audiences that policy-makers face in agriculture, industry and the health sector and among consumers may feel threatened by such policies. Their concerns must therefore be continually listened to and addressed throughout the development and implementation of any national policy.

The new context

A response to the concerns of the audiences whose interests are affected should be framed in terms of the new global context to which they must in any case adapt. Whether they are in the European Union (EU) or its neighbouring states, open borders and communications mean increasing competition for goods, services, workers, finance and information. At the same time, there is additional competitive pressure from Japan and North America and from newly industrialized countries. Further, because of large debts, markets in the developing countries are restricted, reducing those nations' food purchasing power and stifling their own food production capacity.

Another dimension of the globalization of food and diet is the new recognition of the fragility of the human habitat – the need to conserve non-renewable resources and to sustain the richness of soil and forests, the purity of air and water and the diversity of the biosphere. This new reality requires greater efficiency in agriculture, industry and government, a search for lower costs, and more effective and sustainable ways to carry out social tasks. Leaner (or more efficient) and environmentally sound food production is compatible with the leanness of the new nutrition. It might, for example, be argued that a more efficient animal-based food system requires less grain and so less fuel and large-scale mechanization. A more plant-focused system, using biological pest management, could be environmentally sustainable and safer for farm workers and consumers. It might be smaller-scale and more labour- and skill-intensive and thereby create more jobs and greater opportunities for rural development. Local markets and processing facilities could supply fresher food with a higher fibre content that is more adaptable to local tastes and requires fewer additives, and with packaging that needs less energy in its manufacture and is less polluting.

Food systems must adapt to the global shift from stable national markets to small, specialized market segments on the one hand and to large foreign markets on the other. Moreover, consumers have become divided into two camps: the first comprises mass caterers, both public and private, who in many countries now shape a third to a half of the typical diet; the second consists of individual and family food buyers who, however, are no longer necessarily wives with children and employed husbands. Rather, as populations age, more women and young people enter the workforce and the numbers of people living alone, smaller families, single parents and widow(er)s increases. The foods that people need, want and can afford and the places where they eat are also changing.

Finally, in the new context, global telecommunications have become a fact of everyday life, bringing new enticements, information and role models. This applies to those who are seeking and testing new options in food as in other aspects of living, most notably young people and workers in the developing areas of southern and eastern Europe.

All these global, ecological and social developments are forcing change in the food economy and related policy sectors. The food system is thus a complex web, tying food production and manufacture irrevocably to environmental health and wellbeing. An increasingly informed and educated general public is beginning to recognize these links, as are some leaders in agriculture, industry and health. Continuing economic, ecological, demographic and health pressures will force a further awareness and increase demands for change.

Ensuring healthy change

Change is the crux of the European drama. Since all its audiences must share in the dynamics, change should be guided in health promoting directions. As many Europeans well know, change and efficiency need not mean either growing inequality or a lesser quality of life; they can in fact mean quite the reverse, but this will not happen of its own accord.

The possibility for sustainable, safe and healthy food systems in the new Europe will become a reality only if an appropriate food and nutrition policy systematically provides the inducements and controls to guide changes in a sustainable direction. Then, as consumers explore the options of the new market-place, they will be more likely to find and choose healthier diets than those that developed in the 1960s and 1970s in the north and west of the Region, and in the 1980s in the east and south.

Farmers may need transitional subsidies for alternative crops and production methods. The food industry may need technical support. The health sector may need training, guidance and materials, and consumers will require practical information and tax incentives. All can benefit from authoritative public voices supporting a new nutrition.

Good intentions on the part of health and nutrition personnel, leaders in the food industry, individual politicians and teachers will not be enough to develop effective national policies or those for the new Europe as a whole. Changes will only happen when political commitment is translated into institutions that are strong enough to withstand the frustrations, resistance and economic and political pressures that are inevitable parts of such complex long-term policy development. This commitment can take many structural forms, depending on the political and economic situation and culture of each country. Such a resolve is in fact developing in several countries.

In addition to the efforts of individual countries, an identifiable focal point for the new nutrition is needed for the European single market. Transborder movements of food, financing and television will influence and have the potential to stifle the effectiveness of national nutrition and food policies. For example, there is some indication that EU regulators are paying greater attention to the limited issue of biochemical food safety than to the wider issue of macronutrient (fat, protein and carbohydrate) quality. In addition, they do not appear to have any consistent plan to monitor changes in the macronutrient content of diets in different regions of the continent as borders open.

The effectiveness of any national or European body in planning, advocating, guiding, supporting, assessing and revising food and nutrition policies depends on whether it is endowed with committed political and professional leadership, adequate and sustained resources, authority and visibility. At best, the mere existence of such a body can

serve to educate policy-makers, professionals and the public through the media about the complex issues involved in moving food and nutrition in a healthier direction. Its plan of action can then take account of the emerging Europe while being guided by the requirements for long-term nutritional health. If its strategic planning is guided in these ways, a food and nutrition body can create the political climate to make a health promoting food and nutrition policy feasible and effective.

Food and nutrition policy in this century

W. Philip T. James

Whether one worries about environmental and health issues in Scandinavia and other northern countries, wonders how to sustain small farmers in the Mediterranean south, or grapples with the intense problems of producing food in Hungary and other eastern countries, new concepts of health and their dietary basis should contribute to discussions on food and agricultural policy throughout Europe. The problem is that for the last 50 years economists, politicians, farmers and food manufacturers have all accepted certain fundamental ideas about people's needs that are now known to be wrong or too narrow. There have been three historical revolutions in thinking: the first in nutrition science before the Second World War, the second in agriculture since the War, and the third in the understanding of current public health problems.

Before the world wars

The clinical and experimental discovery of vitamins in Europe is a remarkable story. One hundred years ago rickets was accepted as a problem of dietary quality; even a grossly overfed child could be very rickety, whereas a wasted child, dying from lack of food, might have no rickets. In France in 1865, Trousseau emphasized that cod-liver oil was the perfect cure for rickets. This had been proved experimentally in puppies by his compatriot Jules Guérin.

Takaki, Director-General of the Japanese Medical Service in 1882, found that an extra allowance of vegetables, fish and meat or the replacement of rice with barley would cure beriberi, but he ascribed the condition to protein deficiency. It was the Dutch doctor Eijkman, however, who observed in the Dutch East Indies that hens developed beriberi-like symptoms when fed on milled rice, but not on unmilled rice or on rice with added bran.

This all seems obvious now, but Eijkman thought the water- or alcohol-extractable compound from bran was a pharmacological antidote to the microbes in rice that produced the infection called beriberi. The germ theory of disease generated by Louis Pasteur dominated medicine at the end of the nineteenth century. Nevertheless, scientists in central Europe, such as Lunin working with Bunge in Switzerland, described beautiful experiments showing that natural foods such as milk and egg yolk contained very small quantities of unidentified factors essential to health. Then the Norwegians Holst and Frölich produced scurvy in guinea-pigs and showed that the curative factor was reduced by heating, storing or aging the food.

In 1912 Funk, a Polish biochemist working in England, proposed the vitamin theory, but it was Sir Gowland Hopkins who used meticulous feeding studies to show the quantitative importance of these accessory factors for the growth and wellbeing of animals. By 1929 Eijkman and Hopkins had received the Nobel Prize for their vitamin discoveries, and the medical establishment had accepted the importance of micronutrients.

The Americans were now taking up the quest for health: vitamin A was separated from vitamin D; Evans discovered vitamin E; and vitamins B₁ and B₂ were identified. By 1933 riboflavin, and in 1937 nicotinamide, were also established as vitamins, but that folic acid was not discovered until 1941 and vitamin B₁₂ had to wait until 1947. Thus, the full range of vitamins has only recently been established. Indeed, thousands of cases of pellagra from nicotinamide deficiency continued to occur in the United States after the Second World War.

Doctors and nutritionists who are now advising governments heard about the latest vitamin discoveries during their own training at university. This may be why vitamin deficiency problems are so firmly embedded in establishment thinking as being of vital nutritional importance.

Let us now go back to the 1920s when the essential role of minerals, as well as vitamins, was being investigated. Calcium, iron and zinc were soon recognized as essential, but the big question was whether children and adults in Europe had any major problems of nutritional deficiency. Impressive evidence soon began to accumulate from feeding studies on children.

Giving children supplements of milk, sugar, butter or watercress produced very different spurts in growth. Milk, with all its minerals and vitamins, boosted both height and weight and butter, with its energy and fat-soluble vitamins, made the children put on weight. So it is not surprising that meat (the richest source of first-class protein and minerals such as iron and zinc), milk and butter became established as highly desirable (though expensive) foods needed by children for growth and by adults for health and strength.

Children from poor homes were known to grow more slowly than those from more affluent families. In adulthood, working-class men and women remained short and must therefore have been fed less adequately during their early years. Small and thin men had been rejected for military service in many countries from the beginning of the century, and the worry was whether working men and women could obtain enough energy to sustain the demands of vigorous labour. Clearly, large sections of the European populations at that time were not receiving a good diet in sufficient quantity to support optimum growth and health.

By the start of the Second World War the nutritional priorities were clear. If people were to contribute effectively to the war effort they obviously needed to be well fed. The question was how to avoid starvation and how to protect the vulnerable sections of society, particularly pregnant women and nursing mothers and their children. Men and women needed enough energy and food to fight not only on the battlefield but also in the factories and homes throughout Europe. Milk, meat and butter were expensive commodities to produce, and a huge campaign was undertaken to educate people in what was perceived to be healthy eating at that time. The priorities were to produce enough protein- and energy-rich foods, as well as the variety of protective foods that would prevent vitamin and mineral deficiencies. In some countries, such as the United Kingdom, the situation was desperate because the British produced only 30% of their food needs, the rest being imported from the colonies or from North America.

Despite this relatively primitive form of agriculture, the judicious control of food distribution in the Second World War, together with food rationing, proved remarkably effective. Enormous efforts were made to boost the output of farm produce. Women were transferred from the cities to work on the land, and there was an intense campaign of public health education. Every day, people were told the value of following the latest nutritional advice so that they could avoid vitamin, mineral and protein deficiencies.

People throughout Europe were encouraged to grow as much food on their own land as possible, and systematic monitoring of food supplies was undertaken because of worries about its adequacy. To everybody's astonishment, when stillbirth rates or children's weights and heights were monitored and when the disease patterns of adults were checked, it became clear that the people of Europe were often better fed during than before the Second World War. Vitamin supplements such as cod-liver oil and syrups made from berries were used extensively. The prevalence of rickets was reduced and scurvy all but disappeared.

By 1945, governments confronting the problem of millions of refugees were primarily concerned with providing shelter and enough food for survival. Food therefore became one of the highest priorities on

the agenda of governments and those involved in national planning. The issue was how to persuade the farming community to respond to the need for plentiful food, produced at a cost that even the poor could afford.

Agricultural production

We now move to the second revolution, this time in agricultural production. At the end of the Second World War, Europe was still predominantly a continent of small farmers heavily dependent on climate and the quirks of nature. There was limited transport for distributing food, and great importance was attached to the storage of summer produce so that the people in the neighbouring towns would not starve through the winter months. The diet therefore varied markedly from country to country despite increasing mechanization. Only after the First World War had the petrol engine and the primitive tractor begun to replace the widespread use of the horse, which in turn had taken the place of human labour in the fields. Mass production of food now seemed possible as science and engineering were applied to the farm. When Stalin imposed the collectivization of agriculture in Russia, it was expected that the efficient mass production of food could be organized to sustain industrial development in cities.

Food rationing continued after the Second World War and the demand for luxury foods was unfulfilled. The spectacular successes of wartime policies seemed to have eliminated the need for research on human nutrition. Such research could be abandoned in Europe, but continued in the developing world where deficiency diseases, including protein malnutrition, were still rampant.

Food standards had to be maintained, however, to avoid toxins and the adulteration of food. The quality of many food items was regulated. For example, the fat content of milk, butter, cheese and ice cream was specified, because dairy products provided such an important source of calories and protein. Vitamin and mineral fortification of staples such as flour and bread and the iodization of salt were continued.

From the 1950s to the 1970s there was a science-led revolution in agricultural production, with government subsidies, guaranteed prices, a rapid expansion of agricultural research in plant breeding, and the use of fertilizers, growth promoters and pesticides. Animal husbandry and food processing were also high priorities. Pigs, which had previously roamed the fields, were now raised in highly intensive confined environments.

Milk production from dairy cows was steadily transformed, with a remarkable increase in the United Kingdom in the size of herds and the amount of milk produced per cow. The landscape of Europe changed as machinery took over the countryside. Crop rotation disappeared. New high-yielding varieties of cereals and other crops grown in monoculture were possible because of the extensive use of fertilizers, pesticides and growth regulators. There was a huge increase in productivity per hectare, much of it dependent on the massive use of fossil fuel. These changes applied particularly to north-western Europe, but many eastern European countries also followed the policy of collectivization and the introduction of intensive monoculture techniques.

So successful was this policy of intensification in north-western Europe that by the mid-1970s food surpluses were occurring. A variety of measures had to be introduced to reduce the many subsidies, because the cost threatened to overwhelm even the huge budget of the European Community.

What happened to the food supplies to the shops? By the mid-1950s people could, for the first time, experience the pleasures of a rich and varied diet. Confectionery, cakes, biscuits, steaks, cream and butter became available in abundance, so that by the 1960s types of food previously considered to be occasional luxuries were now part of everyday life.

Yet people's nutritional ideas remained the same as in the 1940s. A balanced and varied diet was clearly possible at ever cheaper prices, because farming was becoming so efficient. As family incomes increased and more women went out to work, a new market was created and food manufacturers responded by producing ever cheaper convenience foods. Nutrition was not a problem: as long as there was enough protein, energy, vitamins and minerals in these products, all would be well. A whole array of convenience foods rich in fat, sugar and salt were displayed in ever more attractive packaging. Fat and sugar were seen as valuable sources of energy, and salt was widely used to enhance the taste of new food items.

There seemed less need to bother to grow one's own food, since small neighbourhood shops were giving way to large supermarket chains able to provide an amazing variety of foods. Exotic foods could now be imported from other regions and countries. Imports also overcame the seasonal shortages of standard items in the diet. There was a massive increase in food manufacturing, particularly in northern Europe.

This, then, was the second revolution: a spectacular success story for farmers and food manufacturers, who knew that they had made a great contribution to society by providing so much high-quality food so cheaply.

The health revolution

The third revolution took place in nutrition and public health. While policy-makers in European governments still believed that nutrition was essentially only about vitamin and mineral deficiencies, a completely different story was emerging.

The mid-1960s saw a new type of health problem arise. The life expectancy of both boys and girls at the turn of the century was such that a third of children in 1890 were expected to die from infectious disease before they were 15 years old. A further third of adults died from pneumonia, tuberculosis, diphtheria or other infections before they were 65 years of age.

Improvements in housing and nutrition, and the introduction of immunization and eventually of antibiotics, led to such a spectacular decline in death rates that by the 1970s very few children died before or during their school years. The scourge of infectious diseases seemed all but eliminated. Despite these improvements, some 25% of males and 20% of females would still die before they reached the end of their working lives. A new set of diseases had emerged: heart disease and cancers of the breast, lung and large bowel.

An international study in seven countries, including Finland, Greece, Italy, the Netherlands and Yugoslavia (12), highlighted the risk of heart disease and its relationship to three risk factors: smoking, high blood pressure and high serum cholesterol. Serum cholesterol was already known to rise when there was too much saturated fat in the diet. Salt was re-emerging as a factor in the development of high blood pressure. The medical missionaries Burkitt and Trowell, retiring after a lifetime's work in Africa, were astonished to find a high prevalence of intestinal diseases in the United Kingdom, which they linked firmly to a deficiency of fibre in the northern European diet. In addition, dental caries was being linked to a frequent and excessive intake of sugar.

Nutrition in relation to health is therefore once again a major public health issue. The question is how to modify our agricultural and food production practices to meet the needs of children who no longer suffer from poor growth and nutritional deficiencies. The diseases of affluence are now so common that they are major public health problems in a society that has forgotten the principles of a balanced diet. Farmers, doctors and government officials are often unwilling to accept the evidence, which strongly suggests that we need a new approach to nutrition and health education. People need to recognize that their thinking is still conditioned by concepts formed before the Second World War, which must now be modified. Current agricultural and food production systems, backed by political

and economic considerations, all tend to promote the production of food, which are needed only in moderate amounts.

The public health problem is not simply one of vulnerable groups in society but affects the vast majority of the populations of most European countries. The food production systems vary from the intense north to the tranquil south and to the resurgent farmers of the east, for example, in Poland. As eastern countries of the European Region go through its revolution, and western European agriculture prepares for more rigorous economic times without subsidies, the question is whether we can link the public health priorities of better nutrition with the overwhelming demands being made on the economics of agriculture and food production throughout the Region.

Viewpoints on some major issues

As the previous chapters have indicated, food and nutrition policies affect many interests. Many groups and organizations, including those in the professions and in academia, industry and government, as well as consumers, have points of view on issues important to their particular field.

An array of these viewpoints – not always agreeing with one another – have been extracted from papers written for the conferences mentioned on page 5. They are presented here without further comment, representing the views of people who are active in various sectors of society. There is no assumption, however, that these individuals speak for their entire field of endeavour. It should also be noted that the papers stem from October 1990, so that in some cases new developments have taken place.

An epidemiologist's view – *Knut Westlund*

The study of one indicator of nutrition, the total serum cholesterol level, illustrates the relevance of epidemiology to the policy and work of improving nutrition. It is well known that the use of this indicator can only incompletely reflect the effect of diet on blood lipids or of blood lipids on disease.

In Norway, large cardiovascular surveys have been carried out by the National Health Screening Service, the Ullevål Hospital in Oslo and the University of Tromsø. Tverdal (13) has made a detailed analysis of mortality in people invited for screening up to the end of 1983. Data up to the end of 1988 on 44 000 men whose serum cholesterol level had been determined at the age of 35–49 years show that the age-adjusted total death rate and the coronary heart disease (CHD) death rate are related to the level of serum cholesterol.

Despite differences in age, length of follow-up and follow-up procedures, the trends in the Norwegian data are surprisingly similar to those in data from other, wider studies such as the multiple risk factor intervention trial (MRFIT) study in the United States (14). Nevertheless, even though the Norwegian men were younger, their average cholesterol level was higher. This means that there is a greater potential in Norway for reducing mortality by preventing increases in serum cholesterol with age than in the population screened by MRFIT.

In the same study, similar mortality data exist for 24 500 women aged 35–49 years. Despite the small number of CHD deaths in women (80 versus 1420 in men) the CHD curves for both sexes are almost parallel. Total mortality for both sexes clearly increases with increasing levels of serum cholesterol, but the increase in women does not begin until the level reaches about 2500 mg/l. Some 40% of women have higher cholesterol values.

Potential for prevention

What is the potential for prevention of a reduction in total serum cholesterol? The serum cholesterol level is largely the result of past and present nutrition. Undoubtedly, there are also genetically determined individual susceptibilities in any population, but whether differences in mean susceptibility exist between population groups is unknown and perhaps unlikely.

The word reduction in this context is ambiguous. A distinction must be drawn between preventing a high risk from developing – in this case an increase in the level of serum cholesterol – and the effect of reducing the level of an existing high-risk factor. In practice this is usually referred to as the contrast between the population and the high-risk strategies. The potential for prevention of screening and subsequently reducing individual serum cholesterol levels is slight: with great expense of money and staff resources it might be possible to reduce overall mortality from CHD by 5–10%.

It is an entirely different matter to consider the consequences of preventing an age-related rise in the mean serum cholesterol levels of future generations by 1 mmol/l (38.7 mg/dl). A first approximation is that 1 mmol/l less serum cholesterol in men at 45 years of age corresponds to 40% fewer deaths from CHD and 20% fewer total deaths before the age of 60 years (other risk factors being equal to those present in men with low levels of cholesterol). The reduction in CHD deaths in women may also be approximately 40%; the non-linearity of the relationship makes it difficult to estimate the effect on total deaths.

Other studies have shown that the incidence of CHD closely parallels mortality. It is therefore worth remembering that a 40% decrease in morbidity means that the number of myocardial infarctions prevented will be several times the number of CHD deaths prevented.

A rough estimate would be that if, in a country like Norway, serum cholesterol levels in men and women aged 45 years were 1 mmol/l lower than at present, the CHD death rate in people under the age of 60 years would be halved and the total death rate in men would be reduced by one third.

During the past 15 years, serum cholesterol levels in people aged 40–44 have fallen by some 19 mg/dl in both high-risk and low-risk counties in Norway. In one high-risk county, the mean in that age group is now 250 mg/dl for men and 235 mg/dl for women. A further reduction of 1 mmol/l or even 1.5 mmol/l should therefore not be an unreasonable target. If it were to be achieved, CHD mortality could be expected to fall to 50% or even 40% of its present rate. In those aged 40–49 years it is already down by 30% from its peak in the early 1970s.

The mortality trend in relation to serum cholesterol in Finland is apparently similar to that in Norway. As the MRFIT data also show similar trends, it might be thought that this is a universal phenomenon. Things are hardly that simple. For instance, the twelve-year follow-up to a health survey of people aged 45–64 years in Scotland in 1972–1976 (15) showed some surprising results:

All cause mortality was not significantly related to plasma cholesterol concentrations. This was largely a consequence of a positive relation between cholesterol concentrations and mortality from coronary heart disease being balanced by inverse relations between cholesterol concentrations and cancer and between cholesterol and other causes of death.

There are several differences between the Scottish and the Norwegian data. Nevertheless, the much slighter association between cholesterol level and CHD mortality than in the Norwegian and MRFIT data is striking. The lesson is probably that each country must make its own assessment of what is to be gained by manipulating the cholesterol level of the population.

People with a high cholesterol level differ from those of the same age with low cholesterol in a number of ways: they have a different family history of CHD, have higher blood pressure, drink more coffee and tend to smoke more. Accordingly, it is difficult to believe that, if the rise in the level of serum cholesterol with age is slowed, CHD mortality will be reduced to the rate of those who are

at present low on the cholesterol scale. Nevertheless, the importance of this confounding factor should not be exaggerated. As mentioned, the decrease in cholesterol in Norway over the past 15 years corresponds reasonably well to the 30% decrease in CHD mortality for men aged 40–49 years.

Finally, the development of mortality from stomach cancer and stroke in men aged 50–59 in Norway from 1951 to 1988 shows that, in contrast with CHD, most of what can be achieved in the way of prevention has perhaps already been done. The decline in mortality from stroke is paralleled by a decrease in the incidence of very high blood pressure. The treatment of blood pressure with drugs is unlikely to have been important in this decline, which probably started before the Second World War. The decline in stomach cancer mortality, which may have started as far back as the turn of the century, has been discussed by Doll (16):

The reasons for the reduction remain a mystery. Two factors may have contributed, namely, changes in the methods of food preservation, in particular the use of refrigeration and perhaps the addition of oxidants and the decline in the use of salt, and secondly an increased consumption of fruit and vegetables.

It may well be that similar factors are behind the decline in mortality from stroke. If so, the type of diet that is most likely to prevent the age-related rise in serum cholesterol and, more importantly, is least likely to cause disease will not cause a reversal of the favourable trends for stomach cancer and stroke.

An industrialist's view – Jonathan G.F. Stowell

An understanding of what constitutes good nutrition provides the opportunity to add value to food products in a rapidly changing consumer environment.

The number of people in Europe aged over 60 years will rise over the next 30 years from about a sixth to nearly a quarter of the population. Apart from the fact that older people tend to have more money to spend and to eat different food than younger people, they are also potential victims of the so-called diseases of affluence, many of which are related to diet. Because of this, middle-aged and older people are a receptive audience for health messages and are prepared to make some changes in the food that they consume.

All over Europe interest is increasing in the nutritional properties of food, in addition to the more usual qualities such as taste,

convenience and ability to satisfy hunger. This awareness is created by the media, by food manufacturers through advertising and public relations and, to a lesser extent, by government health education programmes. Moreover, the level of this awareness (although not, of course, necessarily the understanding) are high, particularly in North America and the more northern countries of western Europe.

There is a small but steady trend towards liberalizing health claims for foodstuffs, particularly in countries whose governments are beginning to face the consequences of an aging population and the resulting upsurge in the demand for medical services, caused in part by diet-induced illness. Nevertheless, this trend is not universal and is far from uniform.

The Food and Drug Administration in the United States proposed in 1990 to allow claims for a link between nutrition and disease in six areas: fibre and colon cancer, fibre and heart disease, lipids and cancer, lipids and heart disease, sodium and hypertension, and calcium and osteoporosis.¹ This is an important step in harnessing and focusing the undoubted power of the food industry to communicate relevant nutritional messages.

In Japan, the Government is defining categories of food where a link can be established between the foodstuff and a beneficial physiological effect. Japan is where the aging trend is most acute, and thus where the Government has the greatest incentive to enlist the support of the food industry.

In Europe the scene is very different. Most countries do allow some health claims, but they are very circumscribed. Even in these conditions, however, there is some slow development towards a more liberal approach.

The Commission of the European Communities has made a draft proposal for a Council directive relating to claims made in the labelling, presentation and advertising of foodstuffs. It contains a list of prohibited claims, including those referring to recommendations by competent third parties and those making any connection between nutrition and health.

Industry supports nutrition education in particular areas because it hopes to gain access to, or create, a profit opportunity. It invests money in an activity in the hope of eventual gain for the shareholders, and nutrition education is no exception in that respect.

Industry is often prepared to take the lead in nutritional matters with both products and investment when there is a plausible hypothesis supporting the nutritional benefit but no consensus as yet. If manufacturers always had to wait for consensus, the pace of development

¹ The area of folic acid and neural tube defects was added later.

of nutritionally valuable foodstuffs would indeed be slow. Margarine brands high in polyunsaturated fats were first launched nearly 30 years ago, long before there was consensus on their benefit for blood cholesterol levels. It is hoped that this helped a few people to adopt a healthier diet during those three decades.

The food industry can and does commit very large resources to consumer education and the advancement of science. In addition, it maintains a considerable network of contacts and involvement with the relevant scientific community in the area of research on the physiological effects of dietary fats. Finally, industry works with, rather than competes with, official nutrition and health educators. Nutrition is a complex topic to communicate to consumers and it helps if the messages from all involved with the task are consistent.

Any nutrition policy must be based on sound data. Incredibly, knowledge about which foods and beverages people actually consume is poor and inaccurate in many countries. Obvious omissions, such as food eaten away from home, must be corrected.

It is frequently difficult to reconcile the consumer research carried out in the food industry with officially published data. Moreover, surveys done every five years are just no longer accurate enough to provide up-to-date information in a rapidly changing consumer environment.

A nutrition policy must set clear goals or, if necessary, steps towards those goals that can be taken by ordinary consumers. Most consumers will not make major changes to their diet if these involve loss of quality, taste or convenience. Goals should be related to the means that are or will become available to enable the nutritional quality of the diet to be enhanced without sacrificing other food values.

The main aims of the policy should be capable of expression to the consumer in concise, clear terms: for example, encouraging people to eat less fat, to drink less alcohol and not to smoke. There is a risk of oversimplification that can be criticized by the experts, but it is by implanting relatively simple messages that the behaviour of ordinary consumers will eventually be influenced.

Nutrition policy should be subject to regular review and revision as the state of knowledge develops, and should encourage the cooperation and active support of the food industry. Tasty and reasonably priced food products with the required nutritional values must be available as widely and in as great an assortment (where possible) as they are today. The resources of the food manufacturers can play a major role in communicating to consumers the key messages and understanding that will help to turn the nutritional goals of such a policy into reality.

A technologist's view – *Alain Rérat*

Nutritional problems in Europe changed from undernutrition in the 1940s due to lack of food, giving rise to various deficiencies, to overnutrition in the 1960s due to excessive food supplies, and to pathological disorders such as cardiovascular diseases and obesity. In view of these trends, arising from rapid advances in agricultural production, how can the present agricultural and food sectors exert a positive influence on public health in Europe?

The implementation of a nutrition policy in Europe involves nutrient recommendations designed to ensure a food supply that promotes public health. These recommendations seek to reduce the consumption of saturated fatty acids, salt and sugar and increase that of starch and fibre. In terms of food technology, these recommendations can easily be fulfilled by the agricultural and food sectors because of the important advances in animal and plant biology that have been made, both through expanding knowledge within traditional disciplines (such as genetics, breeding, nutrition, physiology) and in cellular and molecular biology, and through methods of applying this knowledge.

Meat and milk

The heavy consumption of animal fat rich in saturated fatty acids, which is associated with a high incidence of cardiovascular diseases (especially in northern Europe), may be reduced by the provision of animal products with a much lower fat content. Various technical means, though expensive, are available in the meat industry:

- lowering the slaughter weight of all domestic species, since adiposity increases towards maturity;
- stopping the castration of male animals, since this causes heavy deposits of fat;
- creating lean strains (of, for example, pigs) through breeding or genetic engineering, and accelerating the process by artificial insemination and sperm freezing;
- using steroids in cattle and beta-adrenergic substances in pigs;
- using porcine somatotropin, a recent biotechnological innovation whose results may be as efficient as ten years of breeding;
- taking up the possibilities offered by antisomatostatin immunization; and
- the partial replacement of meat products by fish products (which are generally rich in unsaturated fatty acids) as a result of advances in aquaculture and the management of fish production.

The technical means available for milk production are more restricted. For example, the butterfat and protein contents of milk are two genetically related characteristics, and it is impossible to lower the butterfat level via the genetic route without modifying the protein level. The efficiency of genetic improvement can be enhanced by implementing new techniques related to cell physiology and molecular biology, such as *in vitro* fertilization, superovulation and embryo transfer, which can result in the production of more than 30 calves per year from a genetically improved cow. Another possibility is the modification of milk composition by nutritional manipulation, though this is very expensive.

A variety of efficient technologies is available in the food processing industry for reducing the fat content of meat and milk, such as the skimming of milk and the elimination of fatty tissues from meat at the slaughterhouse (mainly in pigs). Since this fat is not recommended for human consumption it must be processed into other products.

In conclusion, many new technologies are available for increasing animal production while improving the quality of products. Because of the high numbers of animal products in Europe, however, these technologies should be used according to an overall policy of production balance and quality maintenance.

Plant foods

The main potential of plant production in terms of health is to increase the availability of starch and fibre in all seasons to compensate for the dietary energy deficit following the elimination of some animal lipids and sugar, and to prevent the occurrence of some types of cancer.

Many technical means contribute to improving both the efficiency and quality of production without promoting overproduction, except in the case of sugar-producing crops. These include transforming the genetic stock of existing varieties to allow them to adapt better to a given environment or production system. In addition to breeding and hybridization, new techniques have been developed such as *in vitro* culture of varieties obtained by cloning high-yield individual plants, chromosome-related techniques, and the production of transgenic plants by injection of genes carrying desired characteristics. Marked advances can be made by using new techniques to create varieties of, for example, maize and sunflowers resistant to unfavourable climatic conditions or to microbial, viral or parasitic attack. Quality can be improved, as in the case of rapeseed varieties lacking erucic acid or glucosinolate. Plant production can also be modified by the development of soil-free culture, as in greenhouses and hydroponics.

The methods involved in animal and plant production also lead to better control of product safety, owing to a more restricted and well defined use of substances stimulating production efficiency (such as antibiotics, hormones and pesticides) or quality (such as anabolic and beta-adrenergic substances and somatotropin). Nevertheless, the agricultural sector cannot prevent contamination from, for example, radioactive fallout or pollution by heavy metals and detergents.

Policy issues

Some potential innovations are very expensive and should be subsidized. Some could lead to a decline in agricultural jobs and consequently in rural populations, which would then have to be relocated. Such developments must therefore be matched by financial and political measures to maintain socioeconomic stability in rural areas.

The major factors now producing changes in the food industry and in national agricultural policies do not spring from a concern about health and nutrition so much as from internationalization, efforts to reap larger profits and concern about environmental protection and animal welfare.

Overproduction of food in Europe has to be seen against a background of endemic malnutrition and hunger elsewhere in the world. Would it not be wiser to replace a policy of reduced production by one of redistribution of surplus to less privileged countries? This should be accompanied by the dissemination of knowledge and technical skills to help populations improve their agricultural practices and meet their own needs.

A regulator's view – *Atle Ørbeck Sørheim*

The major goal of food administrations in all European countries is to protect and/or improve the health of the population. Food law is intended to create a foundation for ensuring that food is of a defined quality and that food labelling and advertising are fair and not misleading. The concept of quality encompasses important health promoting and environmental elements. Policies covering health, the consumer and the environment must form an integral part of overall food policy.

The interplay between food and health involves the nutrient content of the food and any infectious agents or foreign substances (contaminants, food additives or pesticide residues) that it may contain. At present, food authorities have a legal and regulatory responsibility in each of these areas. Bodies concerned with nutrition have the main responsibility for advising on the composition of diets.

It is the general view in most European countries that malnutrition is the most important problem in relation to food and health. Nevertheless, environmental pollution and exposure to chemicals through food are of increasing concern in many countries. Infectious agents also pose an increasing risk to health throughout Europe, perhaps representing the greatest hazard overall. It is not very productive, however, to compare these various elements to determine which of them is responsible for the most days off work or the largest number of deaths. Surveys show that consumers do not rank these potential health hazards in the same order of significance as do experts. Consumers fear the adverse effects of food additives and pesticide residues far more than those associated with an unbalanced diet.

Both food safety and nutrition are largely founded on the same scientific base: the natural sciences, with the main emphasis on physiology, toxicology, microbiology and epidemiology. These disciplines depend on collaboration with the social sciences to determine the best way of communicating with the various consumer groups.

Public authorities implement food safety and nutrition policies through legislation and food control, through public information and by exerting their influence on other authorities with responsibilities in health, agriculture, the environment, education and price regulation. Food and nutrition authorities must work in close collaboration with these sectors.

The food control services of the food safety authorities represent an invaluable network of expertise working in direct and close contact with food producers, distributors and consumer groups. Those working in the field of nutrition also need to contact and cooperate with these groups, but they tend to lack a corresponding formal network. Both, however, have close relations with health personnel.

To gather data on nutrients, additives and environmental contaminants in the diet, the amount of food consumed must be ascertained through dietary studies. In most countries the existing database is extremely poor, and its improvement is a prerequisite for the satisfactory management of both food safety and nutrition. The respective authorities must collaborate in the collection of this essential information; otherwise the public may be confused and frustrated by uncoordinated information. For example, advice that mothers should breastfeed their babies may not appear so sound in the light of information suggesting that breast-milk contains chlorinated hydrocarbons. Similarly, although eating fish or chicken is proclaimed as healthy, we are also informed that the former contains dioxin and the latter may be infected with *Salmonella* or *Campylobacter* bacteria. It is not easy to be a consumer!

In many countries the implementation of policies on nutrition is separate from food control legislation. Nutritional matters are poorly administered, with few resources and little infrastructure. Considering the many common interests, goals and measures, efforts should be made to organize the more effective use of all the resources of food legislation, food control and nutrition in accordance with joint priorities.

The ministry responsible for food administration differs between European countries. What is important is that responsibility is placed where resources are the largest possible. No matter the ministry responsible, health, consumer and environmental considerations must come first.

It is essential that resources are used to the maximum in implementing food safety and nutrition policies. WHO (possibly in cooperation with FAO, EU, the Nordic Council of Ministers and other such organizations) must promote the development of organizational models in individual countries that permit this objective to be achieved.

A legal view – *Paul S. Gray*

The various elements of government action that could be incorporated into the national food and nutrition policy to ensure an adequate, safe and wholesome supply of food include:

- farm, fishery and trade measures to guarantee the food supply;
- a pricing policy and subsidies;
- legal and paralegal measures affecting the content, composition and quality of food;
- education and public information; and
- government-sponsored research.

Law is made so that society may function without overt conflict. Each legal act constrains the freedom of action of individuals in some measure, and in an open society can only be justified to the extent that it is necessary for the protection of other individuals and is of net benefit to society as a whole. It is imperative to examine whether the objectives can be achieved in a less constraining manner or, indeed, whether they can be achieved at all.

Examples from the European Community (EC)

The development of modern food law has gone hand in hand with that of food science. The restriction placed on the manufacturer by

food laws in respect of additives is accepted by all to ensure food safety, and the most stringent assessment is applied. In the framework Directive on additives (17), the Commission of the European Communities is required to consult the Scientific Committee for Food on measures that may have an effect on public health.

The initial approach of the Commission in the field of food law was based on the concept that national law needed to be backed up by Community law in order to ensure the free circulation of goods. Progress, however, was slow since the Treaty of Rome calls for unanimous agreement by the member states. Following a number of cases brought before the European Court of Justice, the Commission proposed in 1985 (18) that Community legislation on foodstuffs be limited to:

... provisions justified by the need to protect public health, provide consumers with information and protection in matters other than health and ensure fair trading and provide for the necessary public controls ... it is neither possible nor desirable to confine in a legislative straitjacket the culinary riches of twelve European countries.

At the same time, the Commission requested a wide delegation of powers from the Council of Ministers to implement such legislation and this has, to a large extent, been granted.

There is no contention about the need to assess the safety of additives, since consumers themselves are not able to perceive that a substance added to food could be dangerous to health. The mention of food additives on the label is also accepted because there is a general requirement that all ingredients be listed.

Food additives

For food additives, the criterion of technological need is often allied to nutritional perceptions and value judgements. For example, the Commission proposed to the Council a directive on sweeteners, which are judged to be important for people wishing to control their energy intake. Some nutritionists argue that the simplest way of achieving this would be to eat less, and that the use of sweeteners encourages a sweet taste that will inevitably lead to a higher intake of energy. Though this argument has some merit, experience shows that, where food is not limited by scarcity or poverty, the mean energy intake exceeds that considered desirable.

Food is plentiful in the EC. The fact that the average expenditure on food and drink is a little over 20% of household expenditure on consumables and services and is falling, means that only for the lowest-income groups is there a limit on cash available for purchasing food (19).

Alternative courses of action – such as banning the use of sucrose or other sugars in the manufacture of soft drinks and similar products, or indeed banning the manufacture of soft drinks – could be more effective in reducing energy intake but would be considered an unacceptable restriction on freedom of choice. Nevertheless, it is considered necessary to restrict the conditions under which sweeteners are used where scientific evaluation has led to the fixing of an acceptable daily intake (ADI). Further, sweeteners may not be used in foods intended for infants and young children; such products are thought to be unnecessary or even undesirable as they encourage the development of a sweet taste.

Similar arguments could be applied to “light” foods, such as low-fat spreads, that remain stable only through the use of additives such as emulsifiers. Bulking agents used to reduce energy or fat intake will also need very careful nutritional evaluation in respect both of their direct effect and of their role in overall dietary balance and behaviour forming.

Regulating food composition by law is accepted where the consumer has special dietary needs. Examples of such foods are infant formulae, baby foods, low-energy foods intended for weight control, foods for special medical purposes and low-sodium foods, including low-sodium or sodium-free dietary salts. These are dealt with under EC legislation by the framework Directive on foods for particular nutritional use (20).

Labelling

Apart from such specific instances, the Commission has opted not to regulate the composition of foods in mandatory instruments. The preferred legal instrument is that of labelling and the 1979 Directive (21) has subsequently been amended and strengthened in a number of ways (22). One aspect of these relates to the so-called quantitative ingredient declaration (QUID). For example, the manufacturers of a product claiming to be a “butter cookie” would be required to declare the percentage of butter used in the ingredient mix at manufacture. The Commission is to set up a legal framework for voluntary quality standards that are guaranteed by a quality assurance and certification scheme. This would provide the protection of law to those who make the effort to offer products of a defined quality and thus be an incentive to improve quality.

Another act of Community food law is the Directive of 24 September 1990 on nutrition labelling (23). The greatest immediate benefit of nutritional labelling is the obligation to provide balanced information that can form the basis for sound judgements, nutrition education, and on-the-spot comparisons by consumers.

The most valuable provision of the new Directive is the obligation to provide full, balanced information when a nutritional claim is made, thus setting the claim in the context of other – perhaps not so desirable – nutritional aspects of the product. The question of whether some health claims should be allowed under certain circumstances has to be weighed against the possible misuse and is being addressed in the current drafts being discussed. It is also proposed to quantify claims of low in relation to the normal levels to be expected, which will be important in terms of bringing some discipline into the use of such claims.

The new food rules will need to be complemented by sound, easily interpreted advice and comprehensive education. Not only governments but also industry and the media can play an important and perhaps even determinant role here.

Food law plays a very important part in nutrition policy by ensuring that substances added to food are safe, by laying down mandatory requirements for foods for special nutritional use, by introducing nutritional considerations into the approval procedures for additives and novel foods, and by providing a framework for the furnishing of nutritional information through food labelling and a discipline for food claims.

A consumer's view – *John Beishon*

Consumer organizations have long taken an interest in food issues. There is a striking degree of unanimity about the relationship between diet and certain important diseases, which is a direct indictment of industry and an indirect indictment of governments. There is a huge imbalance of forces – the food industry spends billions on promoting products but only 1% of that sum is spent by those who provide independent and impartial advice.

Dietary habits are changing rapidly. In Italy, total fat intake increased substantially between 1965 and 1979 from 90 g to nearly 120 g per day. Animal fat consumption has increased by 40%, and has been accompanied by an increase in blood pressure and serum cholesterol levels.

Many nutritionists share the concerns of consumer organizations that the once healthier diets of Europe, especially the so-called Mediterranean diet (Annex 1), are becoming more like those of countries such as the United Kingdom, which are associated with higher rates of noncommunicable diseases. They want to see some action to tackle the existing and emerging diet-related health problems in countries all around Europe. There are clear WHO goals, but no clear plan of action based on them.

To select healthy foods effectively, consumers need information, access and choice. There are significant barriers to these in Europe, where the EC agricultural policy acts as a disincentive to the production of foods for healthy diets, where the food manufacturing and retailing sectors are becoming increasingly concentrated in the hands of fewer companies, where EC law does not provide consumers with the nutrition labelling that they need, and where there is no clear policy on consumer education, allowing the press to create and proliferate myths about nutrition.

Consumer scepticism

Is it surprising that consumers doubt the messages and information they receive when, for example, the experts seem to differ so much in their views? *The Times* of London carried the following story in 1990 (24):

Dr Peter Elwood, the director of the Medical Research Council's epidemiology unit in South Wales, says: "I have no hesitation in saying that the fat hypothesis has been very seriously overstated. There is no evidence that a low-fat diet improves survival, and that is the bottom line as far as I am concerned".

"The increased rates of accidents and suicides among those on low-fat diets cannot be dismissed, because they show up in most of the trials. It may be that low-fat diets have effects on behaviour".

How can one expect consumers to believe what they read about fats and heart disease when they receive this kind of contradictory message?

In a survey of young adults aged 16–19 years in the United Kingdom, cynicism about health experts was pronounced among the older teenagers. Some 62% agreed with the statement "Experts never agree which foods are good for you"; only 8% disagreed.

In reality, the consensus on dietary advice is strong. Recommendations from 80 medical expert committees around the world convened between 1965 and 1987 show a growing consensus on macronutrients (Table 2).

On the question of government intervention there are problems. The EC Directive dealing with food labelling (21,22), for example, does not give consumers what they really need. Manufacturers need not give nutritional information if they choose not to; labelling is still voluntary.

The Directive requires that nutrition information be presented in one of the following formats shown in Table 3. In most instances, however, manufacturers can choose which group to use. This will

Table 2. Expert opinion on intake of macronutrients

| | Yes | No |
|----------------------------|-----|----|
| Less total fat | 59 | 1 |
| Less saturated fat | 55 | 0 |
| Less sugar | 50 | 0 |
| More complex carbohydrates | 39 | 0 |
| More fibre | 33 | 0 |
| More fruit and vegetables | 43 | 0 |

Source: Cannon (25).

Table 3. Formats for presentation of macronutrients

| Group 1 | Group 2 |
|--------------|---------------|
| Energy | Energy |
| Carbohydrate | Carbohydrate |
| Protein | Protein |
| Fat | Fat |
| | Saturated fat |
| | Sugar |
| | Sodium |
| | Fibre |

Source: European Community (21,22).

mean that in many cases it will still be impossible to compare products for their saturated fat, sugar, fibre or sodium contents. Research by the Consumers' Association in the United Kingdom showed that most people looked for information on saturated fat, sugar and energy. This is exactly the information that people concerned for their health need to make informed choices about food and health.

Inadequate controls on nutrition claims

Consumer organizations are also pressing for better controls on the use of nutritional claims. At the moment the terms low and high in particular nutrients can be used at the manufacturer's discretion. This is often confusing for the customer; for example:

- the term “low-fat” may be used on products with a fat content of as little as 0.5% in yoghurts, to 1.5% in custard and up to 40% in so-called low-fat butters;
- the term “diet” appears on products with a very wide range of calorie (kcal) contents (soft drinks, for example, range from 3 kcal (12.6 kJ) per can in Diet 7Up to 60 kcal (251.0 kJ) in Diet Ribena); and
- the term “no added sugar” is found on products sweetened with concentrated fruit juices or honey.

Disincentives to providing a healthy choice

To make effective choices, consumers also need to have access to a selection of foods for a healthy diet, without disincentives in terms of price or quality.

In western Europe, the common agricultural policy (CAP) has always acted as a disincentive to the production of healthy food. Under the CAP, farmers are paid more for their milk if it has the highest possible fat content. Although milk quotas have been effective in bringing down the total volume of milk produced, farmers have been switching to producing milk with a higher fat content and the so-called butter mountain is once again growing. Hospitals in the United Kingdom wishing to offer healthy choices to their patients (in accordance with district food and health policies) cannot even contemplate paying the extra money to provide a choice of polyunsaturated margarines and low-fat spreads.

Access to foods for a healthy diet in the retail and catering sectors is improving, but the consumer must be wary of calls for cooperation with food manufacturers and retailers. Some honourable companies care about the ethics of their trading, but all too many enterprises do not. After all, they are there to serve their shareholders, not the consumer, and nothing is wrong with that so long as they are honest about it and it is well understood.

Consumers are not stupid or so gullible that they cannot see that they are sometimes manipulated. Nevertheless, manufacturers employ very clever agencies and techniques, and they would not spend vast sums of money on advertising if it did not pay off. No matter how sophisticated people think they are, everyone is affected by advertising.

It is right that manufacturers should be free to promote their products, and trade unions to protect the interests of their members. Who then protects the consumer? Consumer bodies are relatively small and weak and poorly funded; there is a limit to what they can do. Government protects the consumer up to a point, and there are

many good examples of regulation and control over foodstuffs and against misleading advertising. Equally, governments are run by politicians and they respond to political forces. They have to take account of their supporters, whether industrial or sectoral. In the view of consumers, governments must address the key issues of education and information. They are in charge of the basic educational system. It is up to them to educate children to be better informed consumers and better informed eaters.

Scientists should recognize that they are unlikely to be as good as journalists at communicating with the public. Scientists can help journalists to produce more accurate messages. Moreover, scientists should not be too proud to learn some journalistic techniques.

Industry will do little or nothing unless it can see a competitive advantage. This is a powerful tool for the consumer movement. If it can be shown that consumers will switch their purchases to products that give more information, or that are more healthy to eat, the manufacturers will have to follow. Consumer organizations must take their role seriously in this area and provide good, independent, well researched and impartial information for consumers.

There is scope for cooperation between groups such as the International Organization of Consumers' Unions on the one hand, and governments and agencies such as WHO and FAO on the other. Consumer groups can provide input and help with planning campaigns to give information to consumers in the right form, so that they will listen to it and benefit from the advice. They can press for stronger laws and regulations in the many areas in food production and processing where market forces and consumer choice cannot provide sufficient protection.

Part II

Perspectives on the 1980s – case studies and progress reports

The second part of this volume is in two sections. The first presents five brief case studies portraying food and nutrition policy development during the 1980s. These are followed by progress reports from the same countries plus some additional ones, mainly from central and eastern Europe.

The first case study analyses the continued implementation of Norway's comprehensive 1975 food and nutrition policy during the period 1980–1987, and this is followed by a study of the early years of a comparable policy implemented in Finland. The third case study gives the background to and describes Denmark's nutrition activities in relation to its food and nutrition policies, and the fourth provides a brief overview of the adoption of Iceland's new food and nutrition policy.

The fifth case study gives the background to the political economies of food and nutrition policies in eastern Europe, in order to help assess the prospects for further development. It also includes information on the nutrition-related health status of people in five regions.

The progress reports that follow are based mainly on material published either for the First European Conference on Food and Nutrition Policies, in 1990, or for the International Conference on Nutrition, in 1992.

The first progress report, from Norway, outlines some organizational experiences after almost two decades of implementing a food and nutrition policy, and summarizes the present community nutrition structure. Finland offers a report outlining its plans for further development of the food and nutrition policy for the 1990s. The report on the situation in Sweden focuses on the administrative framework for nutrition and reviews two large nutrition intervention programmes, one from the 1980s and one from the 1990s, to draw conclusions for the future. A short summary of the lessons learnt is also summarized in the account presented at

the 1990 Conference of the formulation and implementation of the nutrition policy in the Netherlands, which was adopted as early as 1984.

An attempt to describe the development of recent nutrition policy activities in eastern Europe follows, with accounts from Poland and Hungary describing policy initiatives as they were presented in statements at the 1990 Conference.

Norwegian nutrition policy: progress, problems and prospects

Nancy Milio

Worldwide interest in the impact of farm and food policies on health has increased over the past 20 years as a growing body of research has elucidated the connection between diet and health (26). As a result, many countries and regions have developed nutrient recommendations and dietary guidelines and, to some extent, policies to implement them (27). The Norwegian Parliament, in its 1975–1976 session, adopted an unprecedented food supply and nutrition policy intended to bring agricultural production in line with national nutritional and health goals and world food needs (28). Specifically, it sought to:

- encourage a health promoting diet and reduce overall fat consumption (especially saturated fats) by replacing them with, *inter alia*, polyunsaturated fats, whole grains and vegetables;
- promote domestic food production and reduce food imports to increase national self-sufficiency from 39% of total energy to 52% by 1990;
- promote agricultural development in the poorer outlying regions while conserving the environment; and
- contribute to world food security by promoting food production and consumption in poor countries (7).

Norway's efforts have attracted the interest of health and nutrition proponents since its beginnings (29,30). Several limited assessments have been made of its early implementation (31,32). One evaluation of the first five years concluded that it was economic conditions, such as the growing uncertainty of essential food imports from abroad after 1973, that gave the impetus to political action for creating structural changes

favouring an improvement in health. The political action was only taken, however, when economic difficulties were simultaneously eased by factors such as the new wealth generated by oil; and for it to take place, the problems and proposals related to nutrition and health – long advocated to little avail – had to be reinterpreted to the public, interest groups and policy-makers in the light of the economic and political realities. This was made easier because agreement could be reached and decisions implemented through well established and successful organizational links between mutually dependent government and interest groups. Thus, even though nutrition and health were not given priority early in the implementation process, these objectives, as an integral part of policy, eventually had some influence on decisions. This appeared to gain momentum in the early 1980s as a revival of nutrition and health priorities was attempted (33).

This Chapter summarizes the most recent and extensive assessment of the Norwegian nutrition policy (28). It focuses on progress towards implementing the components of the policy and reaching its goals from 1980 to 1987, emphasizes the helpful and unhelpful factors in implementing it, and describes the implications for strengthening the implementation process from a strategic point of view. Information for the analysis was obtained from over 90 hours of interviews with 58 officials from 49 organizations in Norway during July 1987, as well as from numerous documents and semi-public sources.

Point of departure, 1981

The statutory bodies responsible for implementing the nutrition policy were the Interministerial Council (IMC) and the National Nutrition Council (NNC). The IMC's formal mandate was to prepare both annual and long-term implementation plans, define specific tasks and ensure that measures were carried out within the various ministries. It was thus to be a strategic, coordinating and politically accountable body. The NNC was to complement the IMC as an expert advisory unit of four to six people, with educational, monitoring, analysing and information reporting duties and empowered to take initiatives within its remit and resources. The NNC was situated organizationally in the Health Directorate's Food Control and Nutrition Section (an inspecting and regulating unit). The IMC was also subsumed in this section and dependent on it for whatever staff support it had, which was about one person half time. Virtually without any powers beyond the strategic use of information, and dependent on a larger bureaucracy for their limited resources, the IMC and NNC found their policy-keeping task of ensuring the implementation of the food supply and nutrition policy somewhat formidable.

Thus, at the beginning of the 1980s the policy, as represented by the IMC and NNC, was in a weak strategic position compared with 1975 when it had been adopted. It was to face a changing political agenda and fiscal priorities within a more vulnerable national economy; an aging, better educated population exposed to wider viewpoints and expressing a potentially more critical opinion; and powerful organizations whose interests were more likely to collide than coincide with the objectives and guidelines of the nutrition policy. Proponents of the policy judged that the tactical way to gain effective control of its implementation was to develop a second white paper for Parliament, assessing progress and proposing further steps. This was tabled in Parliament in July 1981 (34). Its aftermath is the focus of the analysis that follows.

Fat: the contentious question

The critical issue in the discussions of the second white paper approved by Parliament was a particular aspect of what could be called the new nutrition. Which of the fats normally consumed should be reduced and by how much? Should fat continue to make up 35% of total energy derived from food or, as the minority health and nutrition experts sought, 30% with less emphasis on animal fat?

This conflict was a constant in the implementation of the nutrition policy, albeit in various guises. Excessive production of meat and dairy fat in relation to nutrition goals would affect the production levels and subsidies set in the annual agricultural agreements between the Government and the farmers' unions and the support levels that traditionally favoured dark meat (beef and mutton) over light (poultry and pork). Subsidies would also move away from meat and dairy products.

The problem was particularly acute in shaping education and information programmes and commercial advertising: should the emphasis be on reducing the total consumption of fat, primarily by reducing the consumption of animal fat? It also arose in the development and regulation of new food products. For example, is a spread containing 40% butter still a dairy product? The degree and type of fat reduction also had important implications for food imports, costs to the consumer, and ultimately the size of the agricultural sector and the degree to which the country should be agriculturally self-sufficient.

As the 1980s began, a majority of those directly concerned – in the public and private sectors – continued to accept the view that fat production was not excessive and that the main emphasis should be on a decline in total dietary fat to 35% of energy intake, including but not unduly emphasizing a reduction in saturated fats. This was the consensus within which the IMC and NNC had to continue trying to move the nutrition policy forward. Parliament spelled out this majority view and its ambiguities when

it accepted the report, and it did not question whether the IMC and NNC had sufficient authority or funds to carry out their mandates.

Implementing the components of the policy

All the components of the nutrition policy were implemented to some extent during the 1980s. Not surprisingly, the politically and economically cheaper aspects were more successful. Progress could be attributed to three sources: the activities of the IMC and NNC, the spontaneous response of other organizations acting in their own interests, and changes in the basically uncontrollable social, economic and political climate that affected implementation of the policy independently of those directly concerned.

Information and education

The policy component relating to the development and dissemination of information was the most extensively implemented. It was straightforward, the least controversial and directly in line with the NNC's mandate. The NNC first printed its own material, and then began to cooperate with and receive support from other education, consumer and health organizations in running campaigns in the mass media. By 1987 a nationwide information distribution system was being planned through local health services.

The NNC published a range of materials for the general public that received wide circulation between 1981 and 1987. These included the original nutrition policy (11 000 copies), a colourful school lunch brochure (35 000–50 000 copies per year) and guides for food preparation in health institutions (1985), fast food kitchens (1986) and prisons (1987). In connection with its campaigns it also published a recipe book, *Everyday food*, which was a bestseller at 100 000 copies (equivalent to about 6.25 million in the United States). The one source of funds over which the NNC could exert a degree of control was the so-called education funds available annually since 1976. In the 1980s the NNC began to allocate about a half of these funds for outside projects. Among the numerous small projects thus funded were short courses for personnel, school and fast food information work by county consumer councils, and the development of a cookery book on cassette for the blind.

The NNC initiated and supported training seminars in the new nutrition for staff in a wide variety of governmental, commercial and non-profit voluntary organizations, including some journalists, policy-makers, hospital kitchen managers and researchers. The new nutrition concept was incorporated into a new middle-school text, and its importance was noted in secondary education policy. A new applied approach to advanced

nutrition education was begun, and several hours of nutrition science were incorporated into medical education.

Despite these advances, many gaps and problems remained. There was no evidence that people had changed their dietary habits as a result of the information made available. They were uncertain about the source of information in the mass media on health and nutrition information, and they relied least on health professionals and voluntary societies as information sources. The quality of food and nutrition coverage in the press had not improved, and the wave of foreign commercial advertising through the new cable–satellite information media had not yet even been raised as an issue among proponents of healthy nutrition.

In the absence of funds earmarked for training, the NNC's efforts in this direction were of necessity limited and sporadic. Almost no attention was given to the systematic incorporation of policy goals and the means of attaining them in the in-service education of relevant personnel. Although a few hours of nutrition training were supposed to be part of the continuing education of health personnel, the Health Directorate kept no record of in-service courses nor were any directives issued on their expected content. By contrast, minimum requirements for health and nutrition information were set for the in-service training of fishermen. The NNC had virtually no resources to initiate, sustain or contract out wider efforts. No financing had been made available for community nutritionists in local health services to undertake training, and the IMC members did not attempt to allocate any funds from their ministerial budgets for such purposes.

In the late 1980s farming organizations, recognizing the drop in public support for farm subsidies and tightening government budgets as a sharp reversal of previous practices, began to provide well documented nutrient and health information in new food promotion materials for both their own members and the general public. In a clear, pictorial and informative 1987 booklet *Health and farmers*, farming families were advised that more exercise and better food brings better health, with the appealing rationale for farmers that to eat better food would mean to eat more food. Better food was clearly defined according to NNC guidelines. A description of farmers' cardiovascular problems was followed by sample menus and recipes, which for the first time did not exclusively use whole milk and included other low-fat alternatives, as well as fish. A similar message was given to the general public in the weekend press. This was an apparent acknowledgement that nutrition and health were indeed part of farmers' business, contrary to a public statement in 1982.

Research and evaluation

By the 1980s little of the research on agricultural production, dietary monitoring or policy implementation called for in the 1975 white paper

had been collated for use in policy-making. Research with implications for the implementation of nutrition policy was continuing in the agricultural and economics research network, increasing slowly in fisheries, retail marketing and food import areas, developing in mass communications, and accelerating in the Consumer Research Institute in the areas of institutional and household food patterns.

The most notable gain in research from the policy point of view was a five-year earmarked programme under the IMC in cooperation with the Social Science Research Council (NORAS), which in 1985 began to fund projects such as studies of distribution systems for fish and vegetables, "fat flow analysis" of imported and domestic dairy, meat and other edible fats, the relationship of prices to consumer spending, and the potential effects of a "fat tax". The annual seminars of the NORAS nutrition policy researchers became a forum for exchanging findings, exploring new questions and communicating information to prospective users in policy positions. The potential thus existed for forming a critical mass of people capable of both developing and applying policy.

These and other studies could not, except by chance, be used for implementation strategies without a coordinating mechanism. The 1981 white paper (34) had called for a qualified research coordinator to be attached to the NNC. That staff position was not granted by Parliament nor allocated by the Health Directorate or its Food Control and Nutrition Section. In its annual reports, in accordance with its mandate, the NNC analysed and discussed in detail epidemiological data routinely collected for the Health Directorate, and food supply and consumption data. Apart from this, it had no resources to evaluate adequately its own public information campaigns or the impact of the educational funds that were distributed.

Community nutrition services

The nutrition policy did not provide for any direct nutrition-related services, the small NNC staff precluding such activities. Instead, the NNC was to be the consultant and catalyst for action by other commercial and public service organizations. Further, there were no institutional structures through which the NNC's work could directly reach the public. The IMC, too, had virtually no staff to act on its behalf, and no action programme of its own that could be carried out in cooperation with or within the ten ministries represented on it.

By 1987 a new local service solution was being proposed, in effect privatizing community nutrition services. This would involve local nutritionists forming small organizations that could then accept subcontracts from county health departments to provide the services. Such action, however, would require initiative by the IMC and the Health Directorate.

The farm subsidy economic component

Farmers achieved parity of income with industrial workers in the early 1980s, largely as a result of the combined effects of subsidies to farmers and consumers and in part justified by the nutrition policy. Fishermen, too, fared better by the mid-1980s, achieving a full-time average income up to 30% higher than industrial workers. The significance of milk and dairy production in the agricultural sector was seen in its high and growing share of farm subsidies, reaching about one third of the equivalent of about US \$1500 million that was provided for in the 1987 agricultural agreements. A 1983 decision to stabilize production meant that milk subsidies to farmers, paid through dairy cooperatives, were granted only up to a given volume. Further, the maximum price per litre set by a new formula from 1980 was made contingent on the protein content being increased relatively more than the fat content. Farmers therefore suffered a relative economic loss if they produced either too much milk or milk with more than 3.8% fat.

This posed economic problems for the small, dairy-dependent, often part-time farmers of the mountainous north and west. Although they received added support for growing their own grass fodder, producing lower-fat milk and avoiding imported feed, the national cost of fodder became higher than that of feed. This, in effect, stimulated milk production: with more subsidized fodder and milk there became an incentive for more cows, which meant more beef. Farmers did, however, receive a higher price if they sold calves for meat, thus limiting milk production and providing lower-fat meat for domestic sale.

Potato growing is feasible in Norway and formed a desirable part of the dietary plan of the nutrition policy, yet until the 1980s potatoes received little attention in policy-making. Around 1984, the agricultural agreements for the first time provided for an organized and subsidized potato marketing system. Farmers who entered the system were paid higher wholesale prices for their potatoes. A Potato Marketing Office was set up under the Ministry of Agriculture to promote sales and ensure quality. Quality began to improve within a few years, but only slowly since consumers seemed unwilling to pay a premium price for premium potatoes.

For a long time farm income and price supports aimed at increasing domestic wheat production, since larger quantities of wheat than of any other food had to be imported to meet national needs. The grain funds (over 10% of all farm support) were administered by the State Grain Corporation, a virtual grain monopoly that controlled imports, production, processing and wholesale pricing, and that was able to increase the production and quality of wheat over the period.

The food subsidy economic component

Consumer food subsidies were negotiated annually by the secretaries of state for agriculture, consumer affairs, finance and social affairs (health) within limits set in the national budget. The 1975 nutrition policy clearly stated how consumer price subsidies were to be slowly altered to favour some foods over others (skimmed milk over whole milk, poultry over pork and margarine over butter). In the early 1980s, however, inflation caused consumer subsidies to be cut for the first time. In 1986 the new Labour Government cut them further on the supposition that they helped producers more than consumers.

Throughout the 1980s the NNC sought to ensure that the nutrition policy guidelines were followed in the negotiations that set price subsidies, but its efforts met with limited success before 1987. Overall, subsidies for dairy products almost doubled, and little distinction was made between full-fat and semi-skimmed or skimmed milk. Meat subsidies were, however, phased out by 1987. When compared with the total subsidies on margarine, fish, flour and skimmed milk, the overall combined price supports made the nutritionally less desirable fat dairy foods cheaper for consumers. Compared with 1980, subsidies on fat foods in 1987 were six times higher than on those favoured in the policy guidelines. Low subsidies, such as the equivalent of US \$0.30 per litre of milk, may have had more symbolic value than real power to affect people's buying habits, especially those of affluent consumers. Some subsidies, such as that of about US \$0.90 per kg of cheese, were intended to help people on low or fixed incomes and families with many children.

Other economic policies

Although the interest of fishermen in the domestic market began to increase, there were serious problems in the distribution and marketing of fresh fish. In addition, import restrictions led to very high prices for vegetables and fruit.

Although it had been a stated expectation of Parliament, the IMC apparently never dealt with the question of support to ensure the stability and security of individuals and communities involved in poorer outlying areas during the transition to new farming patterns.

Food regulation and quality standards

Regulation of the quality, development and promotion of food in the 1980s placed new restrictions on the labelling of products and on health claims, but not on advertising. New low-fat dairy products and sausages, low-sodium and soya-based spreads and high-fibre breads were introduced, sometimes requiring prior approval by public authorities.

The monopoly Dairy and Milk Producers' Association, for example, sought to maintain farmers' net income by expanding its market through new products and simultaneously selling excess milk fat. Among other things it introduced a "soft butter" containing 20% soya oil, which could not, however, be called "butter" as the regulations required butter to be 100% dairy fat. As a solution, the Association discreetly distanced itself by creating a subsidiary production corporation.

In response, the commercial margarine producers (who had 80% of margarine sales) brought out a new margarine containing 40% butter. After two years of competition, the soft butters and margarines each appeared to increase their market shares by 1–2%, drawing away an equal share from the traditional consumers of both margarine and butter. By 1987 the dairy industry was preparing to introduce, through its subsidiary, a new light (lower-fat, high-water-content, soya) butter (with 40% fat, of which 80% butter). By 1986 the dairy industry had developed lower-fat alternatives for all of its milk, cheese, butter and tinned products.

Beginning in the late 1970s, the National Consumers' Cooperative sought regulatory approval for marketing several new products complying with the principles of the new nutrition policy. These included a lower-fat sausage (reduced from 23% to 11% fat) and liver paste (down from 27% to 17% fat). With 20% of margarine sales, it also developed light and low-salt margarines. It encouraged its bakeries to use 100% whole-wheat flour and to measure the salt in their products with a view to reducing the sodium content. The Cooperative was also sole producer of a whole-wheat infant cereal developed in cooperation with the Health Directorate and the State Grain Corporation, which it sold at a loss.

Under its mandate to ensure the national supply of grain, the State Grain Corporation regulated the amount and quality of food grains. It set the rate of extraction for flour milling from whole grains, currently at a world high level of about 78%, and the percentage of 100% whole-wheat flour to be blended with more refined varieties of flour by the mills. It then set the wholesale prices of the different kinds of flour bought by bakeries and retailers. As a result of discussions with the NNC, concurrent with a steady improvement in the quality of grain produced, from the late 1970s it gradually raised the rates for extraction and whole-grain blending (30–60%) for the most commonly used bread. By 1986, the fibre content of the national food grain supply had increased by more than 35% compared with 1979. A study by the Consumer Research Institute in 1987 confirmed this, but also found that the amounts of whole-grain flour in bread varied widely (from 20% to 65%).

The quality and marketing of fruit and vegetables were to be improved under a system overseen by a twelve-member council that started operating in 1985, perhaps in response to growing concern among

consumer organizations, which objected to extensive import regulations that barred much fresh produce. There was increasing evidence that food prices were over 50% higher than in other major industrial countries and that specific items, such as tomatoes, bread and broiler chickens, could be up to 30% cheaper if import restrictions were removed.

Integration of nutrition considerations into other policy areas

The integration of nutrition policy objectives and activities into relevant governmental processes was very limited. Modestly favourable prospects for nutritional considerations were emerging in some areas of curriculum development (mainly in children's and health workers' education) and in national health planning. It had been almost impossible to wield any influence in the negotiations on the agricultural agreement or consumer subsidies, and even less so in national resource planning, in the deliberations of the Cabinet, or in parliamentary decisions on agriculture or health.

Some attention to nutrition had been given periodically in the quasi-governmental sector, such as the research organizations, the Consumer Council, the State Grain Corporation and the Norwegian Broadcasting Corporation. In addition, both the cooperative and the commercial components of the food marketing system were addressing nutrition concerns, although sometimes in ambiguous ways. Little effort had been made to regularize these activities or to maximize their effects by, for example, placing NNC members on the governing boards of selected planning, research, consumer, farm, food or media organizations.

Reaching policy goals

Monitoring policy implementation

The information available on progress towards meeting nutrition policy goals and on the performance of the IMC and NNC in guiding deployment can be viewed as a measure of priorities. Such information was relatively sparse. None the less, a review of a range of sources showed substantial gains in those policy objectives that were given priority. When the concept of a nutrition policy was initially defined by its proponents around 1970, improved nutrition and health were to be the primary goals and the security of world food supplies, national self-sufficiency in food and domestic regional development were to be derived goals. In the wake of the 1973 world food shortage, which was the impetus for the design and adoption of the policy, and the leading role taken by the agriculture ministry rather than that responsible for health, the four goals assumed equal status in the first (1975)

white paper (7). The goals less related to health then gained priority in implementation as food production objectives moved ahead.

World food security

In the 1970s Norway moved substantially to promote world food security. It expanded its emergency grain reserve and in 1975 joined the World Food Programme, increasing its commitment by 300% within five years. It also increased its official development assistance from 0.65% of the gross national product (GNP) in 1975 to 1.0% in 1985 (compared with the Netherlands and Sweden at about 0.88% and the United States at 0.22% in 1983).

Norway's contribution to world food security was probably considerable, but the evidence was scattered and uncoordinated.

Self-sufficiency and regional development

The policy goal of self-sufficiency by 1990 was defined as reaching 52% of food production requirements on a calorific basis from domestic capacity, after subtracting any essential feed grain imports and allowing continued fish exports. This figure was 43% in 1974, 46% in 1983 and hovered around 50% by the mid-1980s. High productivity allowed unexpected gains, so that by 1988 self-sufficiency in feed grain was estimated at virtually 100% and food grains reached 50% of requirements, exceeding policy goals. The high cost of the grain policy, however, would require sustained large investments from the public purse, from higher prices paid by consumers or from a decision to import more, cheaper grains.

The capacity for fish breeding expanded by almost 80% between 1983 and 1985, and fish production had more than doubled by 1986. This led to plans to reduce the size of the fishing fleet at sea and to shift subsidies into improving quality and domestic distribution and promoting internal markets, which had declined. The number of fish retailers was growing again, in part because of the fish action plan: there were about 1000 in the mid-1980s compared with 350 in 1982.

Food habits

To estimate food consumption, national food supply must be reflected in consumer purchases and actual eating patterns. Norwegians' food buying habits, as portrayed in household budget surveys, indicated only modest changes in the desired policy directions and some persistent undesirable patterns. Between 1980 and 1985, for example, the consumption of grains increased by 2.2%, vegetables by 1%, fruit by 9%, soya-based margarine by 13% and skimmed milk by 10%. By 1990 the consumption of semi-skimmed milk had increased tenfold since its

introduction in 1985. Favourable declines occurred for whole milk (20%), butter (11%) and “hard” margarines (25%).

There were undesirable reductions in the consumption of potatoes (23%) and fish (16%) and increases in that of snack foods such as potato chips (75%), soft drinks (19%) and chocolate (33%), as well as in cooking and salad oils (25%). There was, however, a net fall of 4% in the total energy derived from fat in the diet.

The nutrient quality of household food purchases showed a favourable shift in the sources of dietary fat in the first half of the 1980s. Relatively more came from oils, cheese and fatty snacks, and less from milk and meat. The largest shares of fat energy continued to be edible fats (39%), dairy products (25%) and meat (18%).

The percentage of food energy derived from fat went down from 40% in 1977–1979 to 35% in 1989, as anticipated in the policy goals. Further, the ratio of polyunsaturated to saturated fats in the diet ranged from 0.35 in the late 1970s to 0.44 in 1989, not quite reaching the desired 0.5 ratio. Carbohydrate consumption was constant between 1979 and 1989, with the proportion of starchy foods and table sugar going down but sugar intake from snacks such as confectionery going up.

Beyond the food available nationally and the kinds of food that consumers buy, national dietary patterns must be assessed by what people actually eat. Such information was sparse in Norway until the mid-1980s. A survey taken two years after the nutrition policy was adopted showed that 20–30% of the population were trying to change their diet and two thirds wanted more information on nutrition. In 1980, about 50–60% were trying to reduce their intake of fat and sugar and, by the middle of the decade, more adults reported that they were making efforts in this direction. For example, the number of people who invariably used little or no butter on bread almost doubled, a significant fact since Norwegians have two or three so-called bread meals (open sandwiches) a day in addition to their main meal. The number of people eating lean meat and drinking skimmed or semi-skimmed milk increased by 20–30%, as did the number of those eating whole-grain bread and no longer drinking full-cream milk at breakfast. Most people said they ate more fish and less meat (78%) and more potatoes (60%), and almost a third ate less cheese (35).

For the growing number of women who entered the paid workforce, not only did family composition change but new eating habits evolved as well. Working women, especially those with young children, used cheaper and more time-saving food products and processed foods. Working women were among the 2–3% of the population who ate fast food several times a week, joining the typical clientele of young single males. Women patrons, however, said they would have preferred to have eaten fresh produce rather than the fast food.

Health

After 12 years there was still no system for assessing the health impact of the nutrition policy, nor was there any coordinated or collated system of epidemiological surveillance for policy evaluation. The proponents of the policy gave most attention to tracking changes in mortality from heart disease, possibly because they considered it the greatest public health problem.

Between 1976 and 1986, deaths from CHD declined in men under 70 years. Death rates from cardiovascular diseases among women aged 40–59 years declined, particularly after 1980, except for myocardial infarction among women aged 50–59 years, which rose.

The largest gains for men relative to women occurred in the highly vulnerable group aged 40–49 years. The relative risk of death for men in this group dropped for acute myocardial infarction, hypertensive heart disease and stroke.

Epidemiologists attributed at least some of the apparent reversal of cardiovascular death rates to the changes resulting from nutrition policy, citing domestic and foreign (in particular American) evidence. The Oslo study (36) of men aged over 40 years, for example, showed that over the ten-year period 1972–1982 average serum cholesterol levels dropped by 5–10%, owing in part to relatively small dietary changes such as systematically replacing fatty foods with low-fat varieties.

This evidence was consistent with the diet–heart hypothesis on which the nutrition policy had been based, but the decline in deaths from CHD was of course also influenced by other changes, such as a reduction in smoking. The importance of controlling smoking was emphasized in the 1975 white paper on food supply and nutrition policy (7) and was supported by stringent legislation passed in the mid-1970s and subsequently.

How did they make the policy work?

Once any policy is adopted, the strategy is to transform it into reality through planned action. The IMC was charged with this task with the technical advice and support of the NNC: to ensure that all necessary means would be used to make the policy work. The effectiveness of such action may be judged by whether and to what extent the policy components were implemented and, if so, whether this was fast enough to reach the goals set for 1990. This assessment focuses on the source of change that was most amenable to control: those designated as responsible for policy, the IMC and the NNC.

Action

Because the IMC existed as an entity for only a few hours each year, having virtually no staff and tenuous internal leadership or initiative, it

may be regarded as strategically relatively unimportant, although it was an important political device for policy-makers. Thus, an assessment of the strategic action that the IMC and NNC actually contributed to policy implementation in the 1980s must first focus on the NNC.

There was no overall strategic plan or framework that addressed the question of what had to be done to get each relevant organization to implement specific policy components by a certain date. This is quite different from an implementation plan that sets out policy components to be implemented, and simply designates who should implement them and when.

The NNC's activities can be viewed as an unwritten information strategy that used various types of information for educating the public, for sustaining communication with other organizations and for persuading organizations and groups to implement the policy.

The NNC exercised its educational mandate to improve the knowledge of a wide range of social groups and organizations on the connections between diet and health. Whether or not people changed their eating habits, the effect was to provide them with a new reason for participating in the wider public discussion on agriculture, subsidies, food and related policy issues, to understand the connections better, and perhaps to form different opinions on policy questions than they would otherwise have done. Whether this actually happened, and among whom, would have been a question for strategic research and analysis. No such effort was possible, however, given the NNC's lack of capability for this type of research.

The second facet of the NNC's activities, the simple exchange of information such as technical data and the sharing of reports or items of mutual interest, was a means of keeping lines of communication open between the NNC and other organizations. Early on, the NNC was often the initiator, disseminating the white papers, for example, or providing updated lists of its publications. Later, other groups such as textbook publishers got in touch with the NNC. The effects of such sustained ties were to establish a measure of trust to serve future cooperative efforts, such as with health services, the mass media or consumer networks. This also served to provide the NNC itself with a better working knowledge of organizational intricacies and clues about impending changes.

Third, the NNC learned to use information in increasingly sophisticated ways. It enlarged its organizational constituency by disbursing grants from its education fund. It used the mass media through press conferences, interviews, seminars and campaigns to enhance its visibility, identity, legitimacy and credibility in the eyes of the public, the media and opinion leaders. It used information in efforts to influence and apply pressure in more traditional, behind-the-scenes negotiations with the people directly concerned, such as representatives of the food

organizations and the parties to the agricultural agreements, although its economic data were weak and sometimes misplaced (28). Its health data alone were not persuasive in altering the immediate economic priorities of the interested parties. Thus, as an advocate for specific, short-term and economic objectives, the NNC's use of information was not enough.

In sum, the NNC was most effective where it could take initiatives and exert independent leadership under the authority of its restricted mandate, and when it was prepared with adequate procedural, organizational, economic, political and other so-called soft information. Such data could, for example, allow it to discern in advance the interests, views and options open to those it sought to influence. Its ability to influence events in turn depended on its access to crucial governmental and other groups. Because of its inadequate financial and staff resources, however, its use of information was in general rather conservative.

Taken together, however, the effects of this use of information for educational, communications and strategic purposes gradually influenced the national policy-making climate, combining with other demographic, health, organizational, political and economic changes that themselves supported further policy-related action by the interested parties. Some food and nutrition groups whose interests, economic or otherwise, were enhanced by the policy (such as the National Consumers' Cooperative, margarine manufacturers and some researchers and broadcasters) initiated moves themselves. The changes they made were easier to the extent that they had become aware of the policy, its implications, its components and the kind of support the NNC could provide. In most instances, their awareness was indirectly derived from one of the NNC's many streams of information dissemination.

Finally, beyond this natural convergence of interests among some of the interested parties and the NNC were the amplifying effects that the NNC's work had on other economic and political trends, such as the cost of and market limits to agricultural growth, the need to re-examine international markets and food issues, and the changing health, nutrition and food needs and preferences of the population. The interested parties who saw their interests conflicting with the nutrition policy and so with the NNC in the light of these considerations would have had to re-examine their goals and priorities in any case. The existence of the nutrition policy and the image created for it by the NNC helped to influence such organizations in their long-term thinking. This became dramatically clear from the new nutrition materials produced by the farming organizations, and was emerging in the development of the new national health policy, previously dominated by an acute and specialist care agenda.

A new opportunity developed in 1987, created partly and indirectly at the urging of the NNC. The social affairs minister, whose mandate included health, ordered a review of the nutrition policy and the presentation

of a third white paper to Parliament by 1989. Proponents of the policy saw this as a new chance to raise the subject of the allocation of priorities and the adequacy of resources to meet the goals of nutrition and health. They insisted on the importance of lowering the dietary goal for fat consumption, especially animal fats, to 30% of total energy intake. They also emphasized the importance of information directed at consumers, health personnel, employers and schoolchildren through the mass media, of in-service training and of changes in curricula. They sought organizational independence for the NNC and the creation of local networks through the placing of a community nutritionist in every county health service. New funds would also be needed to monitor dietary practices, policy implementation and the effectiveness of the IMC. Most of the proponents had less confidence in the effectiveness of food regulation to influence buying habits and almost none believed consumer price subsidies were any longer an important influence. The most politically astute of them, however, recognized that achieving the goal of 30% energy derived from fat required a reduction in agricultural fat production as well as an information strategy aimed at both policy-makers and the public. Unfortunately, the third white paper never materialized and in 1992 the initiative was subsumed into a new health policy based on disease prevention.

Agents

The designation of the IMC to oversee and guide the implementation of the nutrition policy demonstrated the lack of political will to act effectively, which would have required the allocation of sufficient resources for it to do its job. Ironically, the NNC had the will to act but neither sufficient authority nor resources to do so, except in sporadic, inconsistent and often unplanned ways.

The members and observers of the IMC consistently agreed on its limited effectiveness, but put forth a litany of reasons to account for its institutional inertia. Its strategic successes were little more than the development of the second white paper in 1981 (34) and the organization of a nutrition research programme in 1985, the impetus for both of which emanated from the NNC.

While the IMC was intended to contribute to its members' mutual understanding of nutrition policy issues, it was also able to defer (though not stop) policy action. The reasons cited for the IMC's slowness to act included the lack of funds and staff, infrequent meetings, members' lack of understanding as to why they were involved, and no designated responsibilities for each ministry. Statements given by the members in interviews included the assertion that civil servants could not be advocates, and that, if the health sector would provide leadership and set an example, others would be more willing to change.

The IMC carried the authority of the Government, although it did not assert that authority either to obtain the resources it needed or to carry out its responsibilities decisively. Although it was in principle accountable to Parliament, in practice it was rarely called on to account for itself and, when this did occur, the account was cursory and did not reach the Parliamentary Health Committee. Further, consistent with Norwegian tradition, there was no organized nutrition lobby that could bring external pressure to bear or publicly criticize (or applaud) the IMC. The style of the NNC and its organizational dependence on an official body precluded it from taking on this role.

The IMC's reluctance to give a lead rested on the politically easier choice of allowing the conflicting interests among its members to stand. It allowed ambiguities to remain in the second white paper of 1981 (as did Parliament), being unwilling or unable to confront the crucial question of which kind of fat to reduce in the national diet and by how much, and all the consequences that this entailed. Thus, the common perception was that the IMC worked when it was in the interests of the agricultural sector. If this was so, the agricultural sector's power also went unchallenged by the potentially equal but unused power of the health sector.

As a result, most other less involved ministries became bystanders, taking little action within their own bureaucracies. Policy advances became a by-product of other interests, a view also held by outside observers (37,38). Within this vacuum, the NNC became in part a kind of arm of the IMC, picking up the topical themes the IMC designated in lieu of strategic planning. The NNC also became de facto responsible for policy, carrying out strategic activities by trial and error on an ad hoc basis while maintaining its designated educational and reporting roles. Its annual dietary and food supply analyses were thorough, but its mandate to assess the effectiveness of implementation was limited to brief and descriptive ad hoc reports.

Conclusion

In the 1980s the health-related components of Norway's nutrition policy were most extensively, if not adequately, implemented through its information and education aspects. They were carried out to a far more limited extent in its economic, community services and regulatory aspects, and least of all in the field of integration with relevant government processes. By all accounts the pace of implementation was too slow to meet some of the 1990 goals (39). Serious problems persisted in the organization, resources, leadership and accountability of the NNC and IMC, impairing their capacity to act.

Any success in the 1980s could be attributed to the actions of the NCC, which, in spite of its limited capacity, pursued its mandate in ways that were often strategically effective. The NNC also had an indirect influence on the interested organizations, which saw their interests enhanced by the policy once they became aware of it, and some success resulted from action they initiated. Finally, the implementation of the policy depended to some extent on its convergence with other widely recognized trends in the policy-making climate. These trends required even the reluctant interested parties to rethink their goals. Here again, the public and private spelling out by the NNC of the policy's implications indirectly influenced the rethinking process.

Taken together, these streams of change represented a slow process of social integration of the rationale and goals embodied in the nutrition policy. This change in the social environment is likely to continue and to influence future debate and policy development.

Finland's food and nutrition policy: progress, problems and recommendations

Nancy Milio

Finland's food and nutrition policy was approved in principle by Parliament in 1985. The Finnish health for all strategy (40) restates this policy in a refined and updated form:

The goal for healthy nutrition is to ensure a sufficient, balanced and varied diet based primarily on domestic production and pure raw materials. The consumption of fish and low-fat meats, cereals, potatoes, vegetables and Finnish berries should be encouraged as much as possible. The consumption of low-fat dairy products should be promoted in order to reduce fat consumption. The use of sugar and sweets and aliments with high sugar content should be reduced. The same applies to the salt content of food.

The means to be used to achieve the goal include:

- information and education through schools, the mass media and relevant organizations;
- mass catering in schools and other public and private institutions and workplaces;
- product development in terms of low-fat, salt and sugar contents and high fibre content;
- food price changes through customs duties, taxation, price controls and state subsidies; and
- quality requirements.

This chapter is based on a WHO study (40) that examined policy progress and problems since 1985 and concluded with options for

further action. Interviews with over 50 public and private officials were conducted during April and May 1990 in Helsinki, Joensuu and Kuopio, and were supplemented by a review of over 150 publications and documents.

The policy environment

The demographics of an aging, affluent, well educated population and the imperatives of global economic integration have brought new political priorities. These emphasize economic and bureaucratic efficiency, deregulation (consistent with environmental and welfare goals) and decentralization, with corresponding fiscal and administrative responsibility by local government and industry. Accordingly, Finland's national boards are being merged (for example, that for health with that for social welfare, and general education with vocational education), reduced in size and given a greater expert, consultative and educational (rather than regulatory) role. These social, economic and political conditions have influenced the development and implementation of the Finnish nutrition policy.

Changes in demography and working life, for example, mean that (28,41):

- working people eat away from home more often;
- single people and childless couples use so-called convenience foods more often than in the past;
- well educated people seek and find new information on nutrition; and
- affluent people are able and willing to try new foods.

These changes are giving Finns new choices of food and new eating opportunities compared with just 10 or 20 years ago. These do not always, however, provide healthier choices.

Diet-related health status

Finland's adult mortality and morbidity are higher than those of its Scandinavian neighbours, especially from cardiovascular diseases, which are commonly attributed to diets high in saturated fat. The welcome decline in cardiovascular diseases since the late 1970s has slowed in recent years, and this has been attributed to a concurrent slowing in the decline in the population's serum cholesterol levels. Some 80% of the population still have higher than desirable serum cholesterol levels (42).

By international standards Finns are overweight, and men increasingly so, especially younger men. As in other industrialized countries, their diet is high in total fat, saturated fat and sodium, and low in carbohydrate and fibre.

The pace and direction of changes in the population's diet are suggested by postal surveys over the period 1979–1989; when compared with Finnish dietary guidelines, these present a mixed picture. For example, the proportion of Finns who drink semi-skimmed, skimmed or no milk (62%) is rapidly increasing, but 81% still drink up to three glasses of milk daily. Also, the rate of change to lower milk consumption has declined: since 1985 the trend has even reversed among women, so that in 1989 more women drank more milk. The number of Finns who consume sweets or soft drinks more than once a week is increasing, especially among young people.

Policy implementation

The National Nutrition Council (NNC) represents the Finnish tradition of consensus-creating bodies that promote collaboration among the different sectors. These bodies operate in the context of such factors as the relatively small size of the Finnish society and its Government, and the long-term interests of the leadership in all sectors and groups in maintaining a cooperative climate. The NNC has recognized that it does not have the institutional capacity to carry out strategic planning, coordination and monitoring, as implied in its programme for the implementation of the national nutrition recommendations proposed in 1989. Yet in the 1980s it was the pivotal advisory and intersectoral body charged with policy coordination and development. It was placed in the Ministry of Agriculture and jointly administered by the Ministry of Social Affairs and Health.

Food production policies

Economic policy, intended to harmonize with international arrangements, includes tariff and food tax changes that end the favoured status of full-fat dairy products. Related action under the farm policy was intended to reduce Finland's surplus milk fat production and encourage the availability of fresh produce and high-fibre foods, while ensuring equity of income for farmers and rural regions. In 1990, for the first time, consumers and market interests were included in critical negotiations that draw up plans for the national food supply.

Nevertheless, increasing food imports, for example, could mean a greater range of less nutritious products becoming available at competitive prices. Further, a general decentralization of decision-making and competition from other priority areas could lead some communities to defer the implementation of the nutrition policy. On the more positive side, cheaper fish and fresh produce may enter from the European single market.

According to Finnish food policy plans, health authorities are not to be part of the negotiations that effectively shape the food supply, nor do they currently have the organizational capacity to prepare nutrition-related interventions. Only the National Food Administration is involved in the negotiations; this body may not necessarily apply macronutrient criteria and may interpret healthy foods as being those acceptable in microbiological and toxicological terms.

Food processing and marketing

The food industry maintains cooperative ties with state policy bodies and prefers voluntary to compulsory policy changes. It is restructuring to adjust to a shrinking farm economy and to respond to the new concerns of the domestic market while also expanding in Europe. The economic pressures to promote animal fat products to Finns should, therefore, somewhat diminish. At the same time, open trade borders will bring new processed products and advertising from multinational food corporations that may or may not enhance nutrition. The growth of large companies, both national and foreign, may reduce their response to small and less profitable (such as rural) markets.

The members of the food industry as represented by the Food Industry Federation (covering 95% of food processing and marketing) were able to agree to a common position for the NNC's development of the 1989 policy implementation programme:

- food labelling regarding ingredients and composition should be clear but voluntary;
- new products should reflect current nutrition knowledge; and
- government authorities should inform the public about the relative healthiness of foods.

This was a compromise by some sections of the industry, which had previously sought to retain control over labelling and price advantages for butter over margarine and for whole milk over skimmed milk.

Soon after the beginning of price competition among most milk fat products in 1988, the dairy industry asked for and succeeded in getting permission to use more vegetable oil in soft (light) butters. The bakery industry also succeeded in getting wheat prices tied to protein content to improve baking quality. New kinds of food that have been developed include: low-energy and low-fat foods of certain types (such as milks, desserts and oat products); some new uses for milk fat in animal feed and pharmaceuticals; a new line in organic foods; joint ventures in fish products and in European marketing; and the introduction of foods from eastern and southern European countries.

The growing centralization of the food industry, which is geared to competitiveness and increasing profits, is reflected in the fact that the industry's advisory group to the NNC is composed of the largest value-added sectors (meat, dairy, bakery, brewing and confectionery), which in traditional terms may have the least to gain from the implementation of the nutrition policy. It is also reflected in the fall of 40% in the number of food shops in sparsely populated areas between 1985 and 1995, and in the advertising and promotion that have succeeded in increasing sales of milk, cream, cheese, snacks, soft drinks and beer.

Mass catering

Mass catering continues to expand, especially in the private sector. Yet the state provides the majority of catered meals, thereby determining the diet of many Finns of all ages. Several sets of guidelines consistent with nutrition policy goals have been developed for some (but not yet all) types of outlet. Free or cheap meals are widely available. Nevertheless, there are numerous problems with regard to the selection, macronutrient quality control and distribution of food, the staffing of kitchens and the training of staff.

Recommendations on catering services, incorporating NNC dietary guidelines, have been issued for inpatient institutions, workplaces, schools, child day care facilities, military establishments and prisons. There is concern that decentralized budgeting and resource allocation combined with deregulation (with a correspondingly lesser influence at the national level) may lead to a loss of priority for local schools and a consequent reduction in their capacity to implement mass catering and dietary guidelines.

The possibilities for creating local markets for healthier foods and for lowering unit costs in mass catering are limited because:

- there are no chief caterers responsible for bringing the relevant school, day care and institutional personnel together for the purposes of planning;
- except in military establishments, the state has no large storage or distribution systems; and
- the few large private suppliers are reportedly no longer interested in relatively small food orders.

Under proposed developments for farm sideline businesses, and with appropriate modification of the food safety rules and other provisions, some localities might develop alternative food production systems and specify NNC-recommended types of food in their joint purchase contracts. The State Catering Centre establishes annual levels of maximum spending by general product type in contracts with up to 20 suppliers, and in principle could set conditions for contracts. It also produces standard recipes for its kitchens. No health officials sit on the board of the State Catering Centre, however.

Monitoring of the food actually eaten at mass catering outlets is limited; for example, fibre is not monitored. Where it is done, the results do not appear to be used in planning programmes for improving the availability of food or increasing consumer choice. The available data show that, on a yearly basis, the dietary goals have not been met; for example, fats provide 33–37% of energy intake and sugar more than 10% of carbohydrate intake.

Occasional studies suggest that school meals may be high in fat, as may some meals for elderly people (43). The focus is on palatability and individual taste rather than on macronutrient quality.

Trade unions and health and social welfare authorities hope that school and occupational health nurses provide nutrition information to workers and support kitchen staff in following NNC guidelines. Most people believe that this is not being done systematically, although nobody knows for certain owing to the absence of monitoring. Nurses may not be adequately prepared to provide some nutrition information.

Ensuring that guidelines are implemented through in-service training and follow-up presents a problem. Effective implementation requires updating knowledge and developing intersectoral skills in staff working in many areas: health and welfare, education, catering, health and safety, and local environmental health. The content and frequency of such training in recent years is unknown.

Most of the nutrition services provided by local health centres concentrate on counselling individuals following screening for risk factors, rather than developing healthier local food options for the total population. The latter would require the cooperation of health

centre staff or their environmental health counterparts with local and regional food producers, suppliers, caterers and retailers, with the media and with voluntary groups.

Food regulation and labelling

A new streamlined structure for food regulation and labelling came into effect in 1990 as part of central government reorganization. Previous responsibilities shared by the Ministry of Agriculture and Forestry and the Ministry of Social Affairs and Health are now under the National Food Administration in the Ministry of Trade and Industry, whose regulatory tasks and resources have been enlarged. Following legislation, the Ministry will draft regulations, with an Advisory Food Committee with experts on agriculture, import control, industry, farmers' and trade unions, consumers and probably laboratory health (but not health and nutrition).

The National Food Administration has the potential (especially with the prospect of providing consumer-oriented background information and advice to the Government) to influence the macronutrient quality of food from production to retail sale, including public catering. This influence will depend on how it defines quality over and above specific food safety and labelling restrictions, on the types of research and data it seeks, and on how broadly it chooses to educate food inspectors (that is, how closely it interprets the NNC nutrition guidelines).

The effects of international standards for labelling are likely to impinge on food hygiene, toxic substances, additives, quantities and ingredients, rather than on nutritional factors such as the amount of fat and fibre. Major advances have been made in food labelling, although most are voluntary and, taken together, they do not address areas relevant to food and nutrition policy goals. For example, there are no definitions of terms such as high-fibre or whole-grain flour and bread to indicate the percentage by weight of ingredients in grain products or the degree of milling. Thus millers and bakers have no incentive to improve the fibre content of their products. While the fibre content of many Finnish breads is potentially high, there is no guarantee that the recipes used by bakers will result in such products unless there are standard definitions and obligatory disclosure.

Public nutrition information and advertising

The population is exposed to many different and increasingly sophisticated sources of information on food and nutrition. Young people in

particular are exposed to messages and incentives outside the traditional family and school environments. This offers new possibilities for diversifying and reinforcing the diet–health message, but it can also contribute to mixed messages and a less than satisfactory result in terms of nutrition policy.

Many of the nutrition-related recommendations of the plan for the development of health education, covering 1984–1988, have been met to some extent. Public information is available, and guidelines have been written for workplace and institutional kitchens. Prices paid to producers favour non-fat milk, and food regulations address sodium content and permit fibre and sodium labelling. Some of the relevant staff have been trained, and some studies have been made of milk fat and the use of salt. Other recommendations in the areas of training, national policy coordination, monitoring and evaluation and the provision of nutrition expertise, however, have not been carried out.

Less explicit forms of nutrition education and information reach the population through the mass media, especially domestic commercial television and print advertising. Here the food industry is attempting to shed its fatty image and create a healthy lifestyle image, based on its own consumer surveys and sales data that show no promise of profit from fatty foods (or perhaps from foods perceived as fatty). Such information is increasingly provided through advertisements for and programmes about foods from elsewhere in Europe and beyond via cable or satellite television, which is available to 25% of Finnish households.

Some 38% of Finns report that the most common reason for changing their diet is to lose weight. The majority of those who seriously attempt to lose weight or to eat less fat do so without being influenced by their physician or family. This is especially true of women, better educated people and those with a high serum cholesterol level. Most report success.

Thus the knowledge, incentive and support for the new nutrition patterns of many Finns derive from sources outside the clinical and traditional family systems, suggesting that the media, the availability of a variety of food products, prices, workplace and institutional eating, and peer priorities and values have an important influence.

An extensive analysis carried out between 1967 and 1985 of nutrition materials approved for teenagers showed that the majority of these did not reflect NNC guidelines or take account of actual eating patterns (44,45).

Over half of the advertisements aimed at teenagers promote products containing sugar and provide little or no nutritional information.

With the advent of cable television, young people aged 9–24 years in the Nordic countries tend to watch more foreign and less domestic television, and are thus exposed to increased advertising and new lifestyles (46). This, in the context of eating away from home, snacking, peer group priorities and a proclivity for hamburgers and ice cream, strengthens the influence of advertising on the nutrition and health patterns of young people more than is likely for adults.

Although physicians are seen as the most reliable sources of health information, they advised only 15% of the 60% of Finns who consulted them with a view to reducing their fat consumption. The main objective of those seeking advice was to lose weight or to reduce a high serum cholesterol level, although such advice reaches only some 25–30% of high-risk patients.

Although nutrition information is reaching many Finns, the message may not be entirely clear, as words, images, inferences, incentives, opportunities and age-related social and work pressures are inconsistent and conflicting. As noted above, while some dietary habits are improving, others are not, especially among some age, sex and geographical groups.

The food industry is listening for the public's interest in healthy food, but when planning new products it looks to trends in sales data and to the economic prospects for market development at home and, increasingly, in the rest of Europe.

Education, training and research

Nutrition education in Finland has improved in general education, in vocational training for some occupations and in higher education for nutrition and medicine. In general, however, the full scope and implications of the Finnish nutrition policy are not addressed, and there are few educational opportunities to develop the necessary intersectoral skills to implement the policy.

In general education, food and nutrition concepts based on the NNC guidelines have been integrated into the national curriculum through home economics courses in at least two grades. Textbooks have been selected according to whether they adhere to the dietary guidelines. The themes chosen pertain to consumer practices, health and mass communication.

Vocational training in all health care occupations (except medicine) and in hotel and catering services includes a basic nutrition course using texts consistent with NNC guidelines. Other public health and catering courses contain nutrition components, including the catering regulations covering school meals.

Problems with in-service nutrition training for teachers may include the limited time available for contact between the national and local levels and the fact that the regional senior teachers who plan and organize short courses for local boards have a relatively limited knowledge of nutrition.

Because course content is determined locally within the framework of the national curriculum, there is no way of knowing which knowledge and skills relevant to food and nutrition policy are taught. Monitoring and reporting systems have not been set up and the relevant research has not been undertaken, although the need for it is acknowledged.

Students tend to acquire their experience in clinical and technical aspects, and this is probably too narrow to allow them to develop the skills needed to promote nutrition policy in health care and catering. Similar limitations may exist in the development of concepts and skills in higher education programmes for physicians, public health nurses and nutritionists. Where food and nutrition policy is discussed in these courses, the time used is very limited and often depends on the discretion of the course instructors. Experience in learning intersectoral skills, such as collaborating with the education, media and food safety sectors, is almost unavailable.

Finnish research on diet-related issues is deservedly renowned, but there is a dearth of information in the organizational and policy-making processes. Such information will become increasingly relevant as education and persuasion tend to replace regulatory powers in addressing food and nutrition issues.

Policy organization

The NNC, co-chaired by the Ministries of Agriculture and Forestry and of Social Affairs and Health, epitomizes Finnish corporate democracy, which is recognized as creating consensus on policy issues and resolving conflicts and thereby easing implementation (47). Through this structure policy-makers and the public have become more aware of food and nutrition policy issues. This has facilitated the implementation of some recommendations, but has also blurred some issues and deterred their implementation.

Typical of state advisory councils the NNC, with 23 members, had no permanent staff and its secretariat was not relieved of other duties. It had no budget and functioned at the discretion of the Minister of Agriculture and in the interests of its members, who did not always attend the bimonthly meetings. In effect, the

NNC had little capacity to act as a strategic planning, coordinating or monitoring body.

Ministries did not seek new funds to implement the nutrition policy or to earmark staff or other resources for implementation, except in the Ministry of Trade and Industry for food regulation. Thus little if any planning, coordination or monitoring exists within ministries. Monitoring tends to be personal and the policy self-administering.

Summary and conclusions

Some progress has clearly been made in several aspects of Finland's food and nutrition policy: access to nutrition information and education, improvements in mass catering, increased availability of healthier food products, and pricing and quality requirements favourable to a healthy diet. Finnish eating patterns have improved in relation to some recommended foods and macronutrients.

The structural changes in farm and food production are largely the result of new political and economic realities both in Finland and internationally, resulting in the Government focusing on fiscal efficiency, decentralization and a more competitive, consumer-oriented market. This new environment is creating pressures to reduce surplus animal fat production and to expand markets in new foods for Finns and other Europeans who, for reasons of demography, health or working or living arrangements, demand new and sometimes healthier foods. Within this context, some health leaders have been able to make and work for proposals that are consistent both with political and economic imperatives and with health needs.

Although the population's health status is improving and in some respects is exemplary, diet-related death and illness rates and risk factors (such as serum cholesterol and obesity) are high and their decline, along with some healthy changes in eating patterns, has slowed since the mid-1980s (ironically, since the adoption of the nutrition policy). The more slowly improvements occur, the higher will be the social and economic costs.

Major problems in policy implementation exist. Although much has been done in research and demonstration and in the development of national guidelines (in public catering and labelling, for example) there is an apparent lag in translating such soft technology into action and monitoring its implementation in order to develop corrective measures at the operational level. This problem may increase with decentralized budget control and a less regulated market, where listening to the consumer (whether an individual, retailer

or caterer) may not necessarily result in healthier products or more accurate consumer information, especially as foreign products and media continue to attract Finnish young people.

The lack of a leading strategic body that can authoritatively assess and anticipate problems in implementation, deal with them and coordinate and monitor the necessary action is fundamental to these issues. Rapid progress in economic and farm policy development and food enterprises can provide conditions supportive of health and nutrition goals if such interests are systematically taken into account and allowed to moderate potential negative changes. If it is to be effective, such accounting will require initiative, clarity of strategic purpose and organization by health and nutrition leaders.

Options for action

The NNC recognized – and this study confirms – the scattered, ad hoc nature of policy implementation. Accordingly, the following options for action focus on strategic organization.

A strategic body should be formed to plan and oversee the implementation of all components of the nutrition policy, including the establishment of:

- strategic goals, priorities and time frames;
- the responsibilities of relevant agencies;
- systems for monitoring the pace and extent of implementation, evaluation of progress and feedback to interested parties; and
- public reporting of progress to the Government, parliamentary committees and the mass media (to ensure accountability).

Such a body should be:

- representative of interested parties including consumers, the media and local government, as well as national agencies and economic and health organizations;
- led and attended by senior food and health officials; and
- adequately financed and staffed.

Some of its tasks would be:

- to ensure that relevant ministries include the nutrition policy in their five-year plans and regularly provide appropriate guidance, support, monitoring, feedback, evaluation and reporting of progress;

- to coordinate implementation;
- to promote staff development in national agencies;
- to promote implementation in nongovernmental organizations;
- to provide for the development, communication, dissemination and application of information and knowledge (the development of the capacity to implement and monitor progress);
- to recommend policy changes based on progress and monitoring of outcomes; and
- to join its counterparts in Europe in promoting nutrition policy in the European single market.

Denmark's experience with food and nutrition policies

Michael Agerlin Petersen

For many years it has been accepted in Denmark that the public authorities should ensure that certain groups in the population eat properly. Thus, for nutritional reasons, among others, legislation was enacted and controls placed on food production, processing and trade.

School meals services were already common before the formulation of a nutrition policy. In the 1960s and 1970s many experiments were carried out with canteens, cafeterias and meals services. In 1979 an experiment with free school meals in Roskilde showed that there was a significant increase in the number of pupils who drank milk when it was free, but that the number reverted to the former level when payment was reintroduced.

At present the only categories of food subject to mandatory addition of nutrients are margarine, to which vitamin A is added, and infant formula, which must have a defined minimum content of different vitamins and minerals. General permission has also been given to add nutrients to wheat and rye flour, porridge oats, breakfast cereals and fruit syrup.

The production of semi-skimmed milk (1.5–1.8% fat) is permitted, the energy content being 25–30% lower than that of full-cream milk (3.5% fat). When semi-skimmed milk was introduced in Sweden, however, it was mainly the consumption of skimmed milk that declined while that of full-cream milk fell only by about 2%.

The 1973 food legislation makes little reference to nutrition other than to say that the minister can, considering health, nutrition and quality, establish rules concerning handling of single foods including composition, content or other character, and can introduce food composition standards. In 1975 the National Food Agency (NFA) introduced guidelines on the declaration of nutrients in foods. These were approved by the Ministries of Fisheries, Trade and Agriculture, interested trade and

consumer organizations and the Food Council, and the Minister of the Environment recommended that they be followed.

In summary, nutrition initiatives have not been coordinated and have typically dealt with undernutrition and food hygiene. This is an important point in relation to nutrition policy, where the intention is to make a broadly coordinated effort and to deal primarily with overeating.

Demands for a nutrition policy

In 1974 the World Food Conference adopted a resolution encouraging all countries – both developed and developing – to adopt food and nutrition policies. In the early 1980s consumer organizations, cooperatives, political parties and various authorities put forward several suggestions for and descriptions of possible nutrition policies in Denmark.

In 1983 the NFA, an expert panel, prepared a memorandum on nutrition policy in the knowledge that the Social Democratic Party (SDP) was working on a similar proposal.

Objectives

The main objective of a Danish nutrition policy is to promote healthy dietary habits and thereby improve the population's nutritional status. Further, Danish food production must be in accordance with the population's nutritional requirements. Initiatives to improve the population's nutrition should not stand alone but be coordinated with other health promotion and disease prevention activities. Finally, it should be considered whether a Danish nutrition policy could be placed in a global context by taking account of the economic situation in developing countries.

Food policy goals are established in the official nutrient recommendations. Some typical changes in the Danish diet that would fulfil these goals are:

- increasing the consumption of bread and cereals by 20%
- increasing the consumption of vegetables, potatoes and fruit by 33%
- reducing the consumption of butter, margarine and other fats by 20%
- reducing the consumption of fat from dairy products by 20%
- reducing the consumption of sugar by at least 50%
- reducing the consumption of alcohol as much as possible.

These changes would contribute to a higher consumption of vitamins, minerals and fibre, while both total energy in the diet and that derived from fats would decrease.

Means

The traditional means at the authorities' disposal are relatively weak compared to the other interests involved and mainly take the form of informing individuals and social action. Long-term and coordinated initiatives must therefore be taken simultaneously in, for example, the following areas.

Nutrition education and information must be introduced or improved in schools and universities, including that provided for doctors, engineers, dentists, biologists, etc. The National Consumer Agency must strengthen and broaden its efforts to include less traditional means of reaching the less well off, who have the greatest need for information.

Nutrition declarations must be introduced on prepackaged foods.

Public catering should be an example to the population and serve an educational purpose, besides providing good nutrition. A public catering policy will thus be part of the nutrition policy, and a service agency would be needed to collect, produce and disseminate knowledge and experience to kitchens engaged in public catering.

Nutrients can be added to food to prevent nutrition-related diseases. A national dietary survey will be needed to procure the necessary information.

Subsidies and taxes influence consumption but should be used over a broad range of foods to be effective. Nutritional aspects must be taken into consideration before these are introduced.

Food composition standards are part of nutrition policy but have a limited effect. Nutritional considerations must be borne in mind when new standards are produced, and existing standards should not obstruct the introduction of new products with better nutritional composition.

Cooperation with the food industry is important, since more foods are increasingly highly processed.

The medical sector can be useful in determining and surveying nutritional status and identifying risk groups, apart from the important role it plays in promoting breastfeeding.

More knowledge is needed about dietary habits and changes in them, the influence of nutrition on health promotion and disease prevention, and the influence of legislation on people's nutrition. An interdisciplinary nutrition research unit should be set up to define new areas of research, existing nutrition research should be supported, and higher training in nutrition should be introduced.

The 1984 nutrition policy

In 1984, Parliament adopted the SDP's proposal for the introduction of a nutrition policy. The Government was thus asked to put forward the bills

and produce the administrative directives necessary to bring a nutrition policy into effect.

The goal of the nutrition policy was to ensure that the population received a diet fulfilling optimal health and nutrition requirements. A far-sighted nutrition policy could contribute to a further improvement in Denmark's good reputation as a producer of healthy food. The proposal emphasized that a nutrition policy should include the following points.

Proposals were made for an independent unit to strengthen existing research and to coordinate it with agricultural research, and for the NFA to collect information from dietary surveys and to present it as a basis for decisions taken according to food legislation.

The policy should serve as guidance for the population about proper dietary choices and should be based on the Nordic nutrient recommendations (48). Information campaigns should broaden public knowledge about recommended dietary composition. Most important, an economic nutrition policy should be developed based on a system of taxes and subsidies, decisions about which must be influenced by nutritional considerations.

Proposals were made to introduce standards for the composition of all basic food items, to improve declarations and to abolish the addition of colourings and flavourings to basic foods.

Declarations should be introduced on prepackaged foods to enable those responsible for institutional catering to have the same opportunity as ordinary consumers for preparing a healthy diet.

Information should be coordinated to counteract the massive advertising for unhealthy kinds of food, and the mass media should be involved to a much greater degree. Active consideration of special risk groups or communities would be particularly valuable.

Comparison of the NFA and SDP proposals

The NFA memorandum contains an implicit division between objectives and means. The SDP proposal describes some general objectives in the introduction and then describes the means in five paragraphs. The following are the most important differences between the means in the two proposals.

In contrast to the NFA memorandum, the SDP proposal includes the strengthening of existing research and coordination (including agricultural research) in the work of a future nutrition research unit.

The only specific suggestion on catering in the SDP proposal is the introduction of mandatory declarations on retail packaging. The NFA, on the other hand, views public catering as having an educational purpose besides ensuring good nutrition, and proposes the establishment of an advisory service.

Only the NFA suggests improving nutrition education and cooperation with the food industry and the medical sector.

The NFA mentions monitoring the effect of the initiatives; in connection with nutrition research, monitoring is described in broader terms as the legislation's influence on the population's nutrition. The only allusion to monitoring in the SDP proposal is in relation to dietary surveys.

Neither proposal discusses how the suggested initiatives should be coordinated and organized. The SDP proposal instructs the Government to prepare the administrative directives necessary to carry through a nutrition policy, and the NFA memorandum emphasizes that the initiatives must be coordinated with other health promotion and disease prevention activities. Neither gives more specific guidance.

One must wonder why the SDP did not take greater account of the NFA memorandum when preparing the final proposal. The memorandum was issued before the SDP put forward its proposal for the second time and, since the NFA is the organ officially charged with reviewing nutrition, its expertise should have received greater attention. This could have led to a more considered proposal, which would presumably have resulted in more concrete initiatives.

Consequences of the adoption of the nutrition policy

The SDP proposal included suggestions on developing the whole area of nutrition policy. Little concrete action was taken in the period following the adoption of the policy, however, and many of the initiatives were in fact taken before the parliamentary decision. For example, a report in 1983 into the future of nutrition research in Denmark by a committee under the Ministry of Education led to the establishment of the Research Institute for Human Nutrition. The Government took few initiatives and gave only limited grants, however, and the financing and staffing recommendations were only 50% fulfilled. This meant that almost four years passed before the first research projects began.

In 1985 instructions on the quality and other requirements of meat products were introduced, laying down the maximum salt content for most products and the maximum fat content for some. This was not a direct consequence of the nutrition policy, but rather of the trade's interest in equal conditions for competition.

In 1987 the Catering Centre at the NFA was established as a development centre for public and private kitchens. The first plans for establishing such a Centre had been made in 1982 in cooperation with the association of counties and municipalities. The Centre was exclusively financed by an internal reorganization of existing jobs and grants, and

now has a staff of seven. An important aspect of its financing is that it performs paid services, and in 1989 it had an excess of income over expenditure.

The NFA carried out a countrywide dietary survey in 1985. The NFA took the initiative for this in 1981, and most of the preliminary work had been done by the time the nutrition policy was adopted in 1984. The survey was financed by redistribution within the NFA and partly covered by government grants given before the nutrition policy was adopted.

As a direct consequence of the nutrition policy, a committee was established under the NFA in 1985 to work out a plan for improving information about nutrition. It developed a proposal, published as a book whose title means “won’t you have some?”, and a plan of action implying that nutrition information should be moved from the National Consumer Agency in the Ministry of Industry to the NFA in the Ministry of the Environment. A ten-year budget was proposed. The plan never came into effect, however, since the Ministry of Industry would not give up nutrition information and the Ministry of the Environment would not meet the cost.

Other direct consequences of the nutrition policy were the “You will be what you eat” campaign initiated in 1986 by the National Consumer Agency aimed at schoolchildren, and another in 1988 called “Long live the healthy life” targeting elderly people. The campaigns included posters, video films, folders, cartoons, televised information, exhibitions, a slide show and material for study groups. The “You will be what you eat” campaign was carried out without any additional grants, and so was only possible after an internal redistribution of financial resources; in other words, it meant that other areas in the National Consumer Agency had to suffer.

Owing to discontent with the slow progress on nutrition policy after 1984, the National Consumer Agency, an organization with special interest in environmental matters and the food and stimulant industries’ trade union put forward a plan of action in 1988 for a Danish food and nutrition policy with the intention of stimulating debate. This plan of action differed from the nutrition policy and most of the earlier proposals in listing increased influence of consumers and employees as the first point. This included, for instance, greater influence on the future development of the food sector, on the choice of food and on the opening hours of shops, increased cooperation between consumers and employees, and improved working conditions. The second point, on the development of products, included demands that the Government give grants to stimulate the production of traditional vegetables, to support the reorientation of farming towards ecological produce, to develop new products with high cereal and vegetable content, and to develop technologies that protect the environment and resources.

Other suggestions in the action plan included stricter regulation of agricultural and industrial pollution, less intensive production, handling and processing procedures, stricter rules on the use of additives, and the introduction of food composition standards. The plan also covered public catering, information, education, research and local initiatives. The latter include ensuring the existence of local shops and the individual delivery of goods, and grants for local consumer and environmental groups, trade unions and workers in the social, health and education sectors to cooperate in developing local food and nutrition policies.

Finally, the Nordic nutrient recommendations (48) were last revised in 1992. This was a cooperative task among the Nordic countries and was not a consequence of the Danish nutrition policy.

In summary, there has been some activity in the area of nutrition policy since the policy's adoption, but it has not been coordinated or directed towards well defined goals. Most of the initiatives had in fact begun before the policy was adopted and it did not substantially facilitate their implementation. Initiatives taken as a direct consequence of the nutrition policy were either implemented lower down the system or were not carried through because of lack of support from the administration. An exception was the National Consumer Agency's campaign aimed at elderly people, which received limited financial support.

Nutrition policy in the Government's 1989 prevention programme

The NFA was placed within the Ministry of Health to handle nutrition and nutrition policy. The new minister produced a review of health policy, which led to demands from Parliament for a plan for future action. This, in combination with the adoption of WHO's strategy for health for all, was the background for the Government's prevention programme, published in 1989 and submitted to public authorities and private organizations. Their responses were later given to Parliament by the Minister of Health.

The prevention programme includes a separate food and nutrition policy. It emphasizes that this policy's objective is to help motivate the population to choose a diet that fulfils the nutritional requirements of a health promoting and disease preventing diet, and at the same time to ensure pure foods for consumers.

Many important points are omitted from the programme compared to the data on diet and health problems prepared by the NFA. The following are the important changes and omissions.

- There is no mention of reducing salt intake, considering health claims on foods, limiting advertising, setting up experimental projects in relation to public catering, or establishing guidelines for the quality of catering or food distribution.
- The language used to describe goals is much less specific.
- There is no mention of an interministerial coordinating committee for nutrition or food in child care institutions and schools.
- The description of research is very short and general and nothing concrete is promised.
- Food quality is referred to only in a promise to maintain the status quo in food hygiene, to rationalize legislation and administration, and to make an effort to avoid misleading statements in connection with homeopathic drugs, etc.
- There is no mention of the importance of coordinating the individual means of implementing the programme.

These omissions and changes include areas expected to be important in a comprehensive nutrition policy. At the same time, it is striking that all the points omitted either cost money or could be unpopular in the food trade, leading to the supposition that the Government in many cases watered down and weakened a scientifically well founded nutrition policy to save money and please the trade.

Analysis and comparison of the prevention programme's nutrition policy with earlier proposals show that it had some further striking omissions:

- no resources were allocated for nutrition policy action, so that almost everything had to be done by reorganizing existing funds;
- very few concrete goals were proposed, and no deadlines were set for achieving them;
- there were no plans to follow the development of the diet and nutritional status of the population, so it is not possible to measure the effect of any efforts made in this area or to evaluate the different means; and
- there is no coordinating authority, nutrition council or interministerial committee for nutrition, and no central running of the policy; the Ministry of Health alone is responsible for follow-up.

The impression left is that the nutrition policy was adopted not because it was felt to be important but because Parliament put pressure on the Government to prepare a prevention programme and the programme was designed to please voters. Thus it should not be expected that the administration will take many initiatives. Nevertheless, the existence of the nutrition policy opens up the possibility for others (such as the NFA or the National Consumer Agency) to take initiatives, although this is far from the coordinated goal-directed effort that would be the obvious point of a nutrition policy. Future initiatives in connection with nutrition policy will probably result from efforts by individuals or small groups rather than by the central administration.

As well as the lack of political interest, other factors could play a part. There were many new employees in the nutrition unit at the NFA, including a head who was not a nutrition professional. This put the NFA in a weaker position for taking initiatives; the more professionally qualified the personnel are, the easier it is to carry initiatives through, especially any that might seem controversial. It has been too easy for the Ministry of Health to control the content of the programme for other than nutrition reasons.

What happens now?

In the light of this discussion, it is not surprising that few policy initiatives have resulted from the adoption of the prevention programme.

The Ministry of Agriculture did initiate the food research programme, but it will focus on the demands of the food industry as much as on those of consumers.

In addition, some nutrition work has taken place at the local level: for example, the healthy city campaign in Copenhagen, an examination of elderly people's dietary habits in Roskilde, initiatives in preventing heart disease in five counties and municipalities, and experiments with school cafeterias in Hårby and Copenhagen. None of these initiatives is a direct consequence of the nutrition policy; they have all emerged from local initiatives and in many cases have been locally financed. Local initiatives are certainly positive and many valuable results have been obtained, but the national coordination that could be useful in planning initiatives and disseminating the results is absent.

Unfortunately there have also been many initiatives and events with negative nutritional consequences since the adoption of the prevention programme.

A parliamentary compromise on the budget led to the abolition in 1990 of the duty on household sugar as an incentive to people not to shop outside Denmark. The nutritional consequences of this decision were not discussed, even though it is in direct conflict with the nutrition policy in the prevention programme.

The NFA was significantly cut back in 1989, losing 10% of its staff. The future of the Danish Catering Centre at the NFA is uncertain. Finally, the nutrition unit at the NFA was amalgamated with the Central Laboratory. It thus lost its independence and its employees were distributed among five different departments.

The conclusion is that the prevention programme has received very poor political support and understanding. Nutrition has almost never been discussed in Parliament since the programme was adopted. This is not necessarily a result of lack of will, but is in large measure a consequence of poor understanding of what is needed to achieve results. Administrative support has also been poor.

Compared to the SDP proposal, the prevention programme is an improvement in that nutrition policy is seen as being connected with prevention in general. It can be seen as an admission by the Government that it is positive to have a nutrition policy, even though Government actions since the adoption of the programme clearly show that it is not treating this area very seriously. Many people's time and effort have been wasted, and – even more importantly – the people who should be benefiting from the nutrition policy are getting nothing but empty promises. There is the possibility that somebody lower down or outside the system could demand that parts of the programme be carried out by referring to the prevention programme. The fact remains that what should be expected of a nutrition policy has not been achieved by Danish nutrition policy today, and efforts in this area must be expected to continue to bear the impress of scattered and ineffectual initiatives.

Icelandic nutrition policy: success through compromise

Laufey Steingrimsdóttir

On 19 May 1989, Parliament passed a resolution on nutrition policy, making Iceland the third European country to have an official nutrition policy formally acknowledged by the Government.

The formulation of the policy and its acceptance by the Government met less resistance and required less time and effort than many of its proponents had anticipated. What is the explanation for this relatively smooth process in Iceland, and what are the consequences of this initial success? This chapter analyses both the design and acceptance of the policy and some of the more serious problems encountered in attempts to implement it successfully.

Background

The traditional food culture in Iceland is in many ways unique, and it is certainly different to that of any other European country. This fact is basic to an understanding of the background to the formulation of an Icelandic nutrition policy.

Unlike those of many other European countries, the Icelandic diet has never been rich in carbohydrates or starchy food. Mutton, fish and milk products were the staple foods until the Second World War, when rapid changes occurred following occupation by British and (later) American troops. The traditional diet thus appears to have been high in protein and fat and low in carbohydrates, but probably quite meagre in total energy. Despite this pattern, heart disease was almost unknown until the 1950s when, as in most other western countries, it rapidly became a major cause of death. The dietary changes, associated with the epidemic of heart disease were, however, quite different in Iceland from those in any other western European society.

In view of this, farmers and agricultural groups were not easily persuaded that a high-fat diet could in any way be related to heart disease, or any other chronic disease for that matter. The subject was strongly debated in the newspapers and other media, especially in the 1970s, with no particular conclusions or results except confusion among the general public and outrage among farmers for being accused of seriously contributing to the heart disease epidemic with their high-fat produce.

The debate gradually subsided in the 1980s, and nutritionists and health workers emphasized instead the need for a more rational analysis of the situation, drawing attention to the broader changes in lifestyle that had occurred before and during the heart disease epidemic. A real effort was made to reduce criticism of the agricultural sector and to lower hostility and establish trust and cooperation among people engaged in agriculture and nutrition. For example, low-fat dairy products were applauded as well as lean meat, fish and potatoes produced locally. This resulted in a degree of reconciliation between the two groups. Further, increasing numbers of people in the countryside began to recognize the importance of a healthy lifestyle and to demand a greater variety of vegetables, whole-grain breads, low-fat milk and leaner meat and meat products. The agricultural associations have thus come to realize that they must play a constructive role in the inevitable changes in the national diet.

Against this background, members of the Farmers' Party decided to take part in all the stages of the formulation of a nutrition policy. In 1987 they initiated a discussion in Parliament on the need for a comprehensive nutrition policy. The following year they participated in the new coalition Government, including providing the new Minister of Health. The Minister showed interest in the idea of a nutrition policy, and through him the Government agreed that such a policy should be drafted.

As a result, the Ministry of Health was given the official task of drawing up the policy. Two groups were formed for the purpose: a large advisory group consisting of all five members of the Icelandic Nutrition Council and representatives of the ministries of health, trade, agriculture, fisheries and industry; and a three-person working group consisting of the Secretary-General of the Ministry of Health and representatives of the Nutrition Council and of the agricultural sector.

The two groups worked actively for one year, during which time a document was prepared (see Appendix) that satisfied all the parties involved. Some compromises were made, but on the whole the policy document is a clearly worded pledge on behalf of the Government to strive towards improving the population's diet in accordance with the main nutritional goals set forth by the Nutrition Council. The main goals of the policy are to lower the fat and sugar content and raise the fibre content of the national diet. The document is in two parts: a statement of the goals and a list of activities to reach those goals.

Why were the formulation and acceptance of the nutrition policy relatively smooth? Clearly, a key to this initial success was the involvement of farmers' groups in the whole process from the initial talks to the acceptance of the policy. The main resistance to the idea of a less fatty diet had come from the farmers; involving them in a constructive way required some compromises but also guaranteed their acceptance. The compromises were of two kinds. First, emphasis was placed on local food production and on maintaining dietary traditions and the positive aspects of the national food culture. Second, no specific percentage is mentioned for the amount of desirable fat in the diet, only a general statement that an attempt be made to lower the fat content from the current level.

Since the policy was accepted some positive action has been taken: a nationwide nutrition survey is under way, good quality brochures on healthy eating have been printed, courses have been given and meetings and seminars have been held. The policy is clearly receiving some priority in funding as well as in the time given to it by the Minister, who has personally introduced it at meetings with health workers throughout the country. The benefits to be gained from a minister from the Farmers' Party advocating lower fat intake are indisputable. At the same time, there are possible disadvantages to the policy being so clearly political as to involve ministers. Most importantly, decisions on action to be taken are mostly made by politicians rather than by professionals such as the Nutrition Council. The success of the nutrition policy has clearly been reached through compromise; at what expense, only time will tell.

Appendix

The parliamentary resolution on an Icelandic nutrition policy, adopted 19 May 1989

Parliament resolves that efforts be made during the years 1990–2000 to reach the nutritional goals set forth in the nutrition policy drawn up by the Ministry of Health and the Nutrition Council.

The main goals to be reached through the policy are:

- that the Icelandic diet be nutritious with respect to all essential nutrients;
- that energy consumption be in accordance with good health;
- that the consumption of carbohydrates be increased, especially those from grains, potatoes, vegetables and fruits, and that of refined sugar be decreased;
- that protein consumption remain high in the Icelandic diet;
- that fat consumption be decreased, especially that of saturated fat; and
- that salt consumption be decreased.

The following actions shall be taken in order to reach the aforementioned goals.

(a) Domestic food production shall be in conformity with the nutritional goals. Special efforts shall be made to reduce the fat and sugar contents of domestic foods, while maintaining the positive aspects of Icelandic food culture. The same effort shall be made for imported foods, especially with respect to fat and sugar content.

(b) The nutritional goals shall be taken into account in every decision on import duties and taxes and any other government action that affects the prices of foods, i.e. subsidies.

(c) Education in home economics and nutrition shall be increased in elementary and secondary schools.

(d) Education in the food industry, for teachers in home economics and for employees and managers of cafeterias and restaurants shall be improved and given greater support.

(e) Nutritious food shall be made available for students in elementary and high schools during school hours.

(f) Public education on nutrition and health shall be increased and given greater support.

(g) Public awareness on the effect of physical exercise on health shall be improved.

(h) An effort shall be made to decrease the use of tobacco, alcohol and narcotics.

(i) Food control shall be strictly monitored to minimize the risk to health of bacterial or chemical contamination of foods or the inappropriate use of food additives.

(j) The Minister of Health shall sponsor a nutrition survey in Iceland. The purpose of the survey shall be to give information on the present diet with respect to foods consumed and the nutrient composition of the diet. A report on the results of the survey shall be submitted to Parliament. The report shall serve as a basis for the aforementioned actions for the improvement of the Icelandic diet (a-h).

(k) The data from the nutrition survey shall serve as the basis of a plan for the future role of domestic food production in the Icelandic diet and desirable goals in that field. Other aspects, such as food security and economics and the utilization of domestic supplies, shall be taken into consideration in constructing the plan.

(l) Icelandic research in the area of food, nutrition and health shall be supported.

(m) The nutritional goals and nutrition policy of Iceland shall be revised regularly in accordance with new knowledge in the area.

Parliament entrusts the Ministry of Health with the responsibility of realizing the nutrition policy in cooperation with others concerned. The Ministry shall report to Parliament on progress in this area at least every five years.

Past experiences in nutrition policy in eastern countries of the European Region

Wiktor B. Szostak and Włodzimierz Sekula

For about 40 years Bulgaria, Czechoslovakia, the German Democratic Republic, Poland, Romania and the USSR formed a politically and economically uniform bloc of countries. In each of them all economic processes were formulated and implemented under the complete control of the government's central plan.

There were nevertheless some differences between the countries, mostly as a result of their history and national traditions. These could be seen, for example, in the pattern of agriculture and private farms. Private farms did not exist at all in the USSR but they have played a dominant role in Poland ever since the Second World War, although this does not mean there was no political intention to follow the Soviet model in that respect.

The period immediately following the Second World War was one of extreme hardship in Poland. The overall damage to the national wealth was calculated at 38%, including 33% to industry and 35% to agriculture. The nutritional status of the population was very poor and nutritional deficiencies were quite common. In 1945 the food energy available for consumption was estimated to be no more than 2000 kcal (8368 kJ) per person per day. The goal of the Government's policy was simply to increase food production to meet basic needs.

By 1950 the major foods available for consumption supplied approximately 3200 kcal (13 389 kJ) per person per day, more than during the period before the Second World War. Cereals and potatoes supplied 65% of total energy. Since then the national diet, as in many other countries, has been becoming more "affluent".

In Poland, as in other eastern countries of the WHO European Region, an attempt was made in the late 1940s to replace the often

small and inefficient private farms with large state agricultural holdings and collective farms. Not only were the poor effects of collectivization on agriculture in the USSR hidden from the public but the official media glorified the supposed successes. Agriculture was collectivized in all the eastern countries except Poland, where early efforts to do so met strong resistance from private farmers. As a result, in 1953 collective farms in Poland covered only 7% of the total agricultural area and supplied some 6% of total agricultural production.

The Government that came to power in Poland in 1956 abandoned the forced collectivization of agriculture. The growth of private agriculture, however, was restricted through limits imposed on the size of individual farms and the sale of agricultural land as well as by fiscal policy, which was designed to prevent the restoration of capitalism. Collective farms and state agricultural holdings were given considerable advantages in the form of credit, lower taxes and subsidies. This policy did not, however, encourage efficiency. The result was that the agricultural sector was not able to meet the demand for food, particularly meat, and especially in the late 1970s it was necessary to import cereals and other animal feedstuffs.

There were wide variations among the eastern countries in the condition of the agricultural sector, and hence in their ability to meet the demand for food. In Romania and the USSR agriculture was inefficient, with the result that the latter was a net importer of agricultural and food commodities. In Bulgaria, Czechoslovakia, the German Democratic Republic and particularly Hungary, agriculture was reasonably efficient, although only Hungary was a net exporter of agricultural produce.

An important feature of agriculture for nutrition policy was the inadequate production and supply of domestic fruit and vegetables, particularly in the USSR and, to a lesser degree, Czechoslovakia and the German Democratic Republic. The state and collective monopolies in the growing and marketing of these commodities were responsible for the permanent problem of their scarcity, and their importance was neglected in national agricultural policies. In Poland, on the other hand, fruit and vegetable production and marketing have predominantly been in the private domain, so that supply and demand have remained in balance.

The ultimate aim of agricultural policies in all the eastern countries of the European Region has been to increase the volume of agricultural production and to attain self-sufficiency. All have had food policies as well, geared to meeting the demand of the consumer. Economic growth and rising personal incomes led to a demand for foods of animal origin, however, and preference was therefore given to these.

Why no nutrition policies?

None of the eastern countries, however, has ever had a nutrition policy, although some prerequisites for such a policy were present in all of them. There are at least two reasons for this. The first was the nature of the political system; governments had no fear of losing power in free elections. Their only fear was social revolt, and an adequate supply of food, particularly of the commodities preferred by consumers, was a very important condition of political and social stability. Food prices were also a very sensitive issue, and the authorities tried to keep them low and stable by means of subsidies. In effect meat, fat, sugar and milk products were cheap and their consumption was increasing.

In general, the authorities were always concerned about the production of a more or less abundant supply of food, but they have not been concerned to work for consumption patterns that conform to the principles of healthy nutrition.

A second reason for the lack of a nutrition policy was the government monopoly on information. Clearly, public information about the harmful effects of an unbalanced diet is the first step towards gaining acceptance of changes in the production and supply of food and hence of a nutrition policy. Information on nutrition was controlled by the authorities, and without obvious reason there were periods when information on healthy nutrition was completely withdrawn. Under these conditions, nutritionists were not able to express their opinions freely. The limited information available (usually politically motivated) was not trusted by the public, and it was therefore impossible to advocate a nutrition policy.

These obstacles to the development of a nutrition policy were common to all the eastern countries, although they varied in severity. Countries enjoying a higher degree of political freedom were able to be more active. In Poland, for example, cooperation with the mass media had grown since 1973, and political control over nutrition issues was mild and discreet (although effective enough to prevent the communication of any information considered by the censors to be potentially harmful). Nevertheless, it was possible to stimulate an increasing interest among the public in the significance of a balanced diet in preventing diseases of major public health importance. Some prominent people in the Government realized that improving the food policy was important for the country, and some preliminary preparations were made for the design of a nutrition policy. The process of gaining political acceptance for a policy, however, was temporarily hampered in mid-1989 because of unexpected changes in the political scene.

Romania is an example of the opposite situation. It was probably the only eastern country of the Region to possess a state document on food and nutrition policy, prepared on the personal initiative of the then President and approved by Parliament. Romania could also be said to have been implementing a nutrition policy, were it not that the actual policy was in striking contrast to that set out in the document.

The situation in the other eastern countries lay somewhere between those in Poland and Romania. No political authorities were seriously interested in nutrition policy, and expert or social groups lacked the freedom to develop one.

Conditions for nutrition policies

These remarks should not, however, give the impression that nothing was done in this area. The following are some of the conditions necessary for formulating and implementing nutrition policy that were created.

All the countries have set up nutrition information systems based on data from food balance sheets and the results of household budget surveys. Data on the impact of nutrition on health are collected from vital statistics and epidemiological studies, usually by institutes of nutrition.

National recommended nutritional allowances exist in all the countries, and in some they are also expressed as food commodities. Objectives are being or may be formulated on the basis of the recommended allowances.

Although there are no national nutrition councils or similar organizational structures in any eastern European country, the existing institutes of nutrition may play a role in the formulation of nutrition policy.

The educational and primary health care systems are inadequately involved in preventing nutrition-related diseases, although some progress is expected as doctors rapidly becoming more interested in preventing atherosclerosis. There is a developed system of nutrition education in agricultural universities, and efforts are being made to improve the situation in medical schools.

Nutritional labelling systems are incomplete. Food quality regulations exist, and there are quality standards, and an inspection system for quality control.

Economic reforms in some countries, particularly Hungary and Poland, have included the abandonment of government control over food prices. Current economic reforms are market oriented, meaning the abandonment of government control over markets.

Mass catering developed fairly well in some countries, particularly Czechoslovakia and German Democratic Republic. In Bulgaria and Poland, however, it has not played an important role and, because of soaring food prices in recent years, its importance has considerably diminished.

Thus the prerequisites for nutrition policies have existed in all the eastern countries of the Region but there has been a lack of political will to convert existing food policies into nutrition policies. There is a growing awareness in these countries, however, that poor results in preventing diseases of major public health importance stem in part from the neglect of nutritional issues.

Progress reports

Norway

The food supply and nutrition policy objectives stated in 1975 were changed slightly in 1993. The goals of the Ministry of Agriculture remain self-sufficiency with respect to certain foods, and the maintenance and promotion of agricultural development in outlying rural areas with due regard to the environment. Nutrition is not explicitly mentioned in reports on agriculture at ministerial level, although the Ministry was responsible for the first nutrition policy white paper in 1975 (7).

Parliament endorsed two new white papers in 1993. One was on the new agricultural policy and the other, on health policy; it emphasized disease prevention and health promotion, and had a separate section on nutrition policy objectives and instruments for action (49).

Organizational structure

The food and nutrition policy in Norway is linked with those on health, agriculture, fisheries, consumer affairs, education and research. The Government stresses the need for cooperation among these sectors in order to achieve the goals and objectives of the food and nutrition policy. The policy should be implemented through joint action by:

- the public sector
- companies and employees in the relevant economic sectors
- voluntary organizations
- consumers.

The policy also emphasizes that activities aimed at the individual, certain population groups or the community as a whole should be executed in a coordinated manner. Three organizations have a role in coordinating nutrition policy. The Interministerial Council (IMC) and the National Nutrition Council (NNC) are administratively under the Ministry of Health and Social Affairs. The third organization, the Norwegian Food Authority (SNT), enforces food legislation issued by the Ministry of Agriculture, the Ministry of Fisheries and the Ministry of Health and Social Affairs. It coordinates all official control of foodstuffs, provides expertise and advice to the municipal food control authorities, and gives information and advice to other relevant groups such as consumers and the food industry.

The main aim of the NNC is to ensure nutritional quality and to follow up the nutrition policy. Based on its own management plans, its tasks can be summarized as follows.

The goal is to ensure the population a nutritionally optimum diet, as specified by the Norwegian recommended dietary allowances. The objectives are:

- to strengthen knowledge about dietary changes and the nutrient composition of foods;
- to stimulate developments that safeguard nutrition policy considerations;
- to strengthen nutrition competence in and information on consumer issues;
- to promote and coordinate international cooperation in solving problems related to diet and nutrition;
- to strengthen research and communication of results on diet and nutrition; and
- to strengthen nutrition work centrally and locally.

Other actors – such as the National Health Screening Service, the Institute for Epidemiological Cancer Research and the office of the Chief County Medical Officer – contribute through research, public and higher education and practical nutrition work.

Community nutrition work

The Municipal Health Services Act imposes three important tasks on the health services: surveillance, provision of information, and control over and initiatives in the field of environmental health. Specifically, they are to monitor the health status of the population and

the factors influencing it and provide information to people outside the health services to enable them to make decisions. A five-year project has been initiated to test municipal models for following up the Act, with a view to improving preventive health work through coordination with other ministries.

Nutrition has now been included as one of the eight priority areas in the master plan for development projects in disease prevention and health promotion. These projects are related to the dietary goals of the nutrition policy:

- ensuring enough food and a healthy diet for the whole population
- reducing diet-related differences in health status
- providing dietetic services
- producing, distributing and marketing food from the points of view of health, equal geographical distribution of supplies, resources, ecology and ethics (as regards marketing, neither claims nor labelling can be false, misleading or deceptive).

The municipal health services are mainly responsible for ensuring that the population has access to a healthy diet. The intention is to use various means and resources to achieve the national dietary goals for the population by the year 2000.

At present most municipalities clearly do not have the necessary personnel qualified in nutrition to undertake these duties. Only a few municipalities have posts for nutritionists, for example, Oslo and Bergen and the northernmost county, Finnmark. Where these do exist, however, experience has been very positive. It is calculated that about 1 community nutritionist is needed per 50 000 inhabitants, or some 80 throughout the country. There is a sufficient number of trained personnel to fill these positions, but priorities at county and municipal level have not favoured nutrition as yet.

Conclusions and recommendations

General considerations

A holistic normative framework, outlining overall goals and ideals, should be used for assessment, analysis and action concerning food and nutrition policies, strategies and programmes. Such a framework should identify the important areas to be included, and give direction to policy formulation and implementation, nutrition monitoring, policy evaluation and follow-up.

Formulating and planning a food and nutrition policy

Political support and awareness are necessary to move towards food security. Politicians need solid data on food, nutrition and health in order to make decisions; scientific consensus on causes is essential, as are clearly identified and formulated long- and short-term objectives. The question of accountability should also be addressed in terms of who is responsible for what. Management plans will make the achievement of specific goals easier, and the staff involved will need to be trained in nutrition. The key actors need to be sensitized and involved in the process; it takes time and thus patience.

Implementation

A focal point or coordinating body is needed with credibility among the general population and politicians. It should represent important sectors of the food chain, be responsible for the follow-up of the policy and ensure that those in control of food production, technology and sales have ample resources and power and that they advocate nutrition.

The field of nutrition and health promotion still has few supporters. Community mobilization is a good strategy and perhaps the only sustainable one in the long run, but requires adequate resources for guidance and support. Monitoring and evaluation are essential. A nutrition surveillance system is therefore needed that can to some extent be carried out at community level (this, however, has not yet been tried out in Norway).

A nutrition focal point or coordinating body does not necessarily need to be large and bureaucratic. Experience from Norway shows that much can be achieved even with limited resources, particularly if the different sectors collaborate. Such a nutrition coordinating body would have three main areas of responsibility:

- to set standards;
- to act as a catalyst and facilitator in the initiation and implementation of food and nutrition-related programmes and activities, and to help move from theory to practice; and
- to monitor and evaluate, and report back to decision-makers, politicians and other users.

In the field of food and nutrition some form of regulation is necessary; an obvious example is food safety, where strict rules are essential. It is also an area where creativity and freedom of action are important. The question is how to find the balance between freedom and creativity on the one hand, and rules and regulations on the other.

Finland

The group appointed by the WHO Regional Office for Europe (40) to review Finland's policy for health for all put forward suggestions for the future development of Finland's food and nutrition policy, and these have been incorporated into the country's planning process.

Despite positive developments in the nutrition of the population (most notably a decline in the proportion of energy consumed as fat to below 35% of total intake), the most important nutritional problems are still an unbalanced diet, abundant use of salt and an increased prevalence of overweight in men. People are not sufficiently aware of the importance for health of physical exercise, and exercise counselling by doctors and other health care workers has remained poor.

Great changes have taken place in the international situation since the recommendations and suggestions for action set out below were put forward. Finland is now part of the European Union, and the developments under way are likely to be reflected in changes within the food trade and in dietary habits. For this reason progress is urgently needed in:

- coordinating nutrition policies within the public administration, possibly along the lines suggested by the review group; and
- establishing a nutrition monitoring system covering dietary habits, assessment of nutritional status and intake of additives and foreign substances, and setting up a food composition data bank.

Future policy development

Some strategic and tactical action could improve opportunities for intersectoral cooperation and for the integration of food and nutrition policy into Finland's health for all strategy.

The National Nutrition Council recognized the ad hoc nature of the implementation of food and nutrition policy in Finland. Political will and organizational arrangements are needed to provide an effective strategic body to foster intersectoral action, give leadership and oversee the implementation of all, or at least the major, components of the policy. Given Finnish corporate democracy, the feasibility of providing such a strategic function should be quite high. The formal ministerial responses to the Council's 1989 recommendations on implementation might provide a basis for the development of a strategic plan.

One possibility might be to set up a strategic body to implement and monitor the policy. This should represent all interested parties,

including consumers, the mass media, local government and national and financial organizations, and should be led by senior officials dealing with food and health. The chair might rotate between the agriculture, health and food administrations. The ministries likely to be involved (such as those for agriculture, trade, health, education and transport) should ensure that such a body had adequate financing and a permanent staff.

The development of food and nutrition policy requires improved skills and better organizational capacity at the national and local levels, even if the setting up of a strategic body were considered unsuitable in the Finnish circumstances or not feasible in the short term. These conditions might be achieved through incentives or specific contracts. Whatever mechanism is considered most appropriate, political and organizational capacity is necessary:

- to set up strategic goals, priorities and time frames;
- to review responsibilities and provide skills and other resources to relevant agencies for the systematic monitoring of progress in implementing the policy, and to provide feedback to interested parties;
- to improve the visibility of the policy and ensure accountability, for example, through timeliness in public reporting of progress to the Government, parliamentary committees, voluntary and commercial associations and the mass media;
- to promote the implementation of the policy by nongovernmental organizations; and
- to provide training opportunities and incentives for relevant people at both national and local levels.

In addition, intersectoral action would be facilitated by ensuring that all relevant ministries included the policy or some of its major components in their five-year plans.

The monitoring of equity – in access to nutrition information, in the distribution of food and in the cost and availability of healthy diets to different social, ethnic and age groups, to both sexes and to all geographical areas – seems to have been relatively neglected. The evaluation of the impact of policy measures to reduce inequity would furnish valuable information for policy purposes.

Further, monitoring and evaluation of the food and nutrition policy would probably shed more light on the variety and relevance of factors influencing eating habits. Experience in other countries shows that the future development of the policy will increasingly require a thorough understanding of the factors influencing eating

habits and consumption patterns. It is crucial to understand the specific and interrelated effects of these factors. This means that there is a need for multidisciplinary research integrating the social, political and nutritional sciences. Research topics would include developing an understanding of the social epidemiology of nutrition through monitoring trends and variations in food consumption and eating habits, particularly as regards differences between socioeconomic groups.

Sweden

Sweden has a population of nearly 8.5 million. It is a rich, industrialized nation with a well developed agricultural sector that is organized to ensure self-sufficiency in times of crisis. A hundred years ago, however, it was a poor nation with serious nutritional problems.

Organizational structure

Today health, medical care and nutritional issues are dealt with at three levels: at national level through the ministries and boards, at regional level through the county councils, and at local level through the municipalities.

The Ministry of Health and Social Affairs develops health and medical care policies and programmes, and the National Board of Health and Welfare has primary responsibility for the surveillance and control of these programmes. Two other organizations that significantly influence nutrition are the Ministry of Agriculture and the National Food Administration (NFA), each with its defined area of responsibility. The governmental body responsible for carrying out agricultural programmes and policies is the Agricultural Marketing Board. To complicate the picture, the Swedish Ministry of Education and Cultural Affairs with its corresponding agency, the National Board of Education, works with educational issues and the Ministry of Finance sets price and tax levels. These four ministries and their respective agencies have the greatest influence on the population's nutrition through legislation, policy and specific programmes.

In 1983, new legislation governing health and medical care (including prevention in the broadest sense) came into effect. This made the 24 county councils responsible for developing and implementing preventive programmes in the field of nutrition, among others. Fortunately, the county councils also administer most of the hospitals. After the armed services, the hospitals in the area controlled by Stockholm County Council are the second largest customer for food. In 1989, the equivalent of US \$55 million was allocated for the purchase of food by these hospitals.

Various local authorities in the municipalities are responsible for local environmental protection as well as for food services connected with day centres, schools and social service facilities for elderly people. Like the county councils, the municipalities are therefore important food customers.

Several of the county councils and municipalities have recently either decided on official food and nutrition policies or have included the issue in proposed health programmes aimed at environmental protection.

Public catering services

Since the mid-1940s it has been customary for hot lunches to be served to pupils in schools and up to 1967 they were subsidized. Today, municipalities are financially responsible for these programmes, which means that their quality varies from place to place.

In addition, employees of private companies and factories are usually offered hot lunches at work or provided with luncheon vouchers. Thus, issues surrounding diet and nutrition are dealt with by many different authorities and organizations.

The Swedish diet

Dietary habits have changed a great deal during the past hundred years. This trend can be described as going from poor nutrition (because of a scarcity of healthy products) to deficient nutrition (because of an excess of certain unhealthy substances such as salt, sugar and fat). Interestingly, during the 1940s the average diet was for the most part in line with today's recommendations.

Education and training

During the 1960s the problem became one of health education. It was necessary to inform people about poor dietary habits and suggest how the situation could be remedied. Two publications, entitled *Malnutrition in a welfare state* and *The Swedish public's diet*, gave rise to an increased concern for diet and nutrition.

In 1968 a graduate programme in nutrition was established at the Karolinska Medical School of the University of Stockholm. Several years later, a chair was established in the subject and today the Department of Medical Nutrition at Huddinge University Hospital in Stockholm is responsible for nutrition education in Sweden.

Administrative responsibilities

In 1972 the NFA was established and new food legislation was passed as the basis for its work. Today the NFA and the National Board of

Health and Welfare are jointly responsible for making recommendations about nutrition; these are drawn up by a group of medical experts and revised periodically. The NFA has sole responsibility for supervision and inspection regarding food additives and nutritional supplements (vitamins and minerals), as well as pesticides.

At the end of the 1960s the Swedish Medical Society officially approached the Government to draw its attention to the deteriorating dietary habits among the population. That resulted in a national movement dealing with problems of diet and physical exercise.

The first intervention programme: diet and exercise for the 1980s

The planning of a comprehensive diet and exercise programme began in 1969. The National Board of Health and Welfare was responsible for the programme, whose initial phase was carried out by two groups of experts – a medical group and an organizational group. The aim was gradually to bring about a much needed shift in individual dietary and exercise habits through concentrated research, education and information, using resources at all government levels and involving both food producers and food wholesalers.

Various community organizations cooperated. Food producers developed products with lower fat, sugar and salt contents and healthier products were advertised more. A special task force set up in 1972 to collaborate with the commercial sector is still active after more than 20 years.

Projects under the programme were coordinated by a project advisory group, and in several cases task forces were also set up. Two medical expert committees, one addressing children and the other adults, were set up and attached to the National Board of Health and Welfare. Their publications on diet and exercise (1971) and diet and physical activities in childhood (1973), were milestones for future health work in Sweden. The books were among the first to put forward dietary recommendations and offer practical suggestions as to how to get people to follow them. These books and their subsequent revisions have been the basis for many activities in the field of nutrition and are still being used.

The programme initially concentrated on workplace canteens and restaurants. Fourteen conferences were arranged nationwide aimed at catering personnel, and some 3000 people participated. Campaign material carried the messages such as “Reduce fat content in both cooking and serving” and “Increase vegetable consumption”, and included sample menus that could easily be adapted to certain kinds of canteen, such as those in day centres, centres for elderly people and prisons.

A brochure entitled *What kids eat* was produced in six languages, aimed at the parents of children in day centres. Distributing it to parents via the centres' employees created an opportunity for them to discuss the subject together with employees.

A campaign carried out in 1973/1974 entitled "Start the day better" was the first to demonstrate how cooperation with food producers could work. Nearly 900 000 brochures and booklets were distributed across the country. Even though not all the new products reached the ideal low fat and sugar contents that had been established, a positive attitude was detectable as food producers became involved in health-related activities. The campaign also stimulated debate on ways in which the official authorities could and should cooperate with food producers. This debate continues, as witnessed by the health education programmes aimed at diet and nutrition initiated by several county councils.

Another large-scale campaign mounted in conjunction with food producers was the bread campaign of 1976/1977. This was organized by the Swedish Bread Institute (a coalition of bakeries that receives a government subsidy) in consultation with the National Board of Health and Welfare. Advertisements proclaiming in large letters that "The National Board of Health and Welfare wants you to eat 6–8 slices of bread daily" were spread across the country. The campaign received both praise and condemnation, and was the brunt of many jokes as well as the subject of anything from serious debate to comedy revue. Some people approved of the Government's unconventional approach, but critics felt that the campaign was beneath the dignity of the National Board and were extremely critical of its involvement in people's dietary habits. Nevertheless, the campaign helped the general public to realize that bread is an all-round food, and the Board gained a reputation for being an authority on dietary and nutritional education. Many years later there is still hardly a Swede who has not heard the expression "6–8 slices of bread a day". The 12% increase in bread consumption during the 1980s can probably be attributed in part to the campaign.

The strategy for health education during the 1970s was the so-called top-down model; that is, experts decided on what should be done and developed all the materials themselves. It was used in the diet and exercise programme that legitimized new methods of health education. Thanks to that campaign and the 1983 Health and Medical Care Act, a number of county councils, municipalities and organizations began their own health education programmes.

In addition, the Trade Union Federation has focused particular attention on those of its members who work in food production and the nutrition area generally, such as those working in shops, the food industry, works canteens and restaurants.

Health education programme: Target Health

“Target Health” is a community-based health education programme that focuses on an urban population of 1.6 million in Stockholm County – the most heavily populated county in Sweden – and includes 25 municipalities. The goal is to reduce cancer incidence and mortality. One main objective is to reduce the population’s fat consumption from 40% to 30% of total energy intake while raising the daily consumption of fibre to 3 g/MJ.

The strategy relies on broad cross-sectional cooperation to get its message across to the community, involving in particular food producers, local grocery outlets, works canteens, restaurants, municipal agencies, health authorities, dentists and voluntary organizations. The local media have supported these activities.

Preparations for Target Health began in 1983, thanks to financial support from the County’s Health Committee. The programme began in January 1987 under the responsibility of two new units in the County Council, the Cancer Prevention Unit at Karolinska Hospital and the Department of Applied Nutrition at Huddinge Hospital.

Target Health’s first priority was to develop a working relationship with caterers and restaurants, since many people in the Stockholm area eat out at lunch. There are some 6600 cafeterias and restaurants in the County. The first step was to develop a cookery book in collaboration with 50 organizations. A contest was held to identify healthy as well as tasty recipes, and these were complemented by recipes from food producers. All the recipes were assessed for their nutritional level and then adapted to the objectives of the programme. In addition, they were all tested for consumer reaction in at least two locations such as day centres, works canteens and centres for elderly people. Kitchen employees were also asked their opinion, since food preparation had to be simple and the dishes popular with consumers.

In April 1989, Target Health held a food fair to encourage and stimulate food producers and wholesalers to develop healthy products, to promote existing healthy products, and to bring together people with different occupational experience to demonstrate the importance of intersectoral work. The fair was the first of its kind in Sweden and attracted a lot of comment in the media. Approximately 50 producers showed their products, some 6000 people came to the fair and 1000 people attended the conference held in connection with it. Evaluation showed that both exhibitors and visitors were very interested, and a second fair was planned.

Did the intervention programmes work?

These examples of health education programmes demonstrate that it is possible to alter the general population's dietary habits and enhance its interest in food and diet. Each programme has been based on cooperation among various organizations and professions, something that has been lacking at national level in Sweden as regards nutrition policy. At present ministries propose laws and guidelines that clearly contradict each other from a public health perspective. Political statements have been weak at times when they could have had a positive influence on people's dietary habits. Almost no consideration has been given to the nutrition and/or health aspects of agricultural and food policies under discussion; the question is often rather one of controls related to farmers' allowances and subsidies.

A good example of the latter is the increased subsidy for animal production at a time when nutritional recommendations are encouraging a higher consumption of cereals and vegetables. Another involves the encouragement being given by both the National Board of Health and Welfare and the NFA for people to eat more vegetables, fruit, berries and low-fat foods; the cheapest way to do this is to freeze one's own food, yet taxes are higher on houses with freezers.

The programmes owe their success to their local nature. It is doubtful whether national programmes could achieve the same success, since it is difficult to exercise social control and engender a feeling of individual involvement at national level.

Unfortunately, price often determines which products are bought. If county councils and municipal food buyers coordinated their purchasing policies, there would be greater interest in developing healthy products. Common health criteria would lead to the disappearance of many unhealthy food products from the market.

The way forward

The NFA needs additional funds to enable it to carry out its responsibility to set food standards and thus make the purchase of healthy products easier. At the same time, such standards must not halt or delay the development of new products.

It is hoped that in future nutritional issues will be coordinated and emphasized in the work of the Public Health Group, which was set up by the Prime Minister in 1988 to propose concrete suggestions as to how the Government could reduce public health problems. The Group has suggested that the following are imperative in improving dietary habits and nutrition.

- An overall health goal for food policy must be determined.

- Agreement should be reached with public radio and television regarding scientific and public service messages about health.
- Funds should be allocated for agreed study material dealing with prevention.
- Dietary information should be integrated into educational programmes for day care workers, teachers, health and medical workers and staff in commercial kitchens.
- All grants for health information from general funds should be coordinated.
- Measures should be taken to make it easier to reduce fat consumption by informing the general public and educating key people and groups. Farm subsidies for milk products should be removed and the prices of high-fat and low-fat products differentiated.
- Research into alternative uses for milk fat should be encouraged.
- Research in the field of public health should be increased.
- Menus used in commercial kitchens should promote healthy dietary habits and be complemented by descriptions of meals so as to encourage the consumption of cereals, fruit and vegetables.

The Netherlands

Surveys have shown that Dutch consumers are aware of the importance of a healthy diet, but believe that the greatest risk to health stems from the presence of chemicals in food. The Government has therefore focused on setting limits for contaminants, regulating the use of food additives and laying down rules for the use of pesticides, veterinary drugs, etc.

This was the situation in the Netherlands in 1981 when Parliament asked the health minister to take action to promote food safety and improve the nutritional value of foodstuffs. As a result, in 1983 it was announced that a nutrition policy would be prepared, describing measures to be taken and placing the issue of food safety in perspective. The main conclusion was that an appreciable reduction in the incidence of certain diseases of affluence could only be brought about by a change in lifestyle, particularly in eating habits.

These proposals were accepted during the ensuing parliamentary debate and several measures were taken. A database was set up to provide readily available data on the nutrient content of different

foodstuffs, and a market research bureau surveyed food consumption in a representative sample of the population. A committee was set up to supervise the surveillance system. In 1986 the Nutrition Council published guidelines for a healthy diet.

The report on nutrition policy was presented to Parliament in 1987. Based on data from the database and the survey, the nutrient intakes for different population groups were compared with the nutrient goals proposed by the Nutrition Council. This showed that the Dutch diet did not correspond with that recommended in the report, the main problem being too high an intake of fat, especially saturated fat. Since the production and consumption of food is influenced by so many factors, unilateral action by the Government would not suffice. A steering group was therefore set up, with representatives of the food industry, consumers, health educators and the Government, to cooperate in developing multisectoral activities.

The objective of the steering group was to implement the first nutrition plan, to reduce fat intake, particularly saturated fat, by 4% of total energy in four years. This was to be achieved by coordinating, stimulating and supporting the activities of three working groups, representing the catering industry, food manufacturing and nutrition education, set up to propose specific nutrition projects.

Efforts were made to increase the knowledge of consumers and caterers about the fat content of food, including prepared dishes, and to promote awareness of lower fat intake through improved food labels, brochures, press articles, television programmes and low-fat menus.

A more individual approach was also felt to be necessary. Funds were therefore identified to support a large-scale publicity campaign by a supermarket chain, giving advice about individual fat intake and ways to reduce it.

This approach was flawed by inefficiency and lack of progress, however, so a project leader was appointed in 1989 to speed up the initiation of projects and improve their coordination and implementation. Since then a number of projects have been carried out. The most striking is an in-store promotion supported by the mass media. The justification for using the major part of the steering group's budget (equivalent to US \$1.2 million in 1990) on this campaign stemmed from the conviction that that was where the greatest effect was produced.

Owing to the reappearance in the press of concerns over food safety (dioxins, salmonellosis, food allergies) a revised nutrition plan was prepared and nutrition advice and education centralized in a nutrition centre. This centre was due to open in 1992 and to be a focal point for nutrition questions and a meeting point for workers in the nutrition field.

Much has been learned from the drafting and implementation of the nutrition policy. The key points in its success have been:

- political backing for the policy, without which progress would have been delayed by endless discussion of the objectives and ways of improving dietary habits;
- the commitment by all parties involved to cooperate in the steering group;
- the decision to appoint project leaders for the nutrition plans, thus clarifying responsibility and providing a focal point; and
- the provision of funds to set up the framework.

The difficulties have been:

- the continuing focus of public opinion on chemicals in food, rather than on choice of food;
- slow progress by the steering group because of a lack of clarity in setting tasks in the working groups in the absence of a responsible project leader; and
- slow development of commitment by participants in the steering group and the bodies they represent.

Poland

The policy environment

The Polish Government has always exercised some control over food consumption, although not making a formal nutrition policy. This has stemmed from the fact that in Poland, as in several other countries of central and eastern Europe, the Government controlled social and economic activity at national level through national plans.

Consumption of commodities and services were integral elements of these national plans. Consequently, food consumption goals took the form of the quantities of the most important foodstuffs to be made available for individual consumption each year. These goals took into account the capacities of the state agricultural and food processing industries, and trends in food consumption. Medical experts were invited to give their opinions on desirable food consumption patterns, but they had little influence on food goals.

After a new Government came to power in 1970, there were particularly rapid changes in the national diet. The food goals then set aimed at increasing the consumption of foods of animal origin.

Some groups of experts were aware that the intended changes in nutrition might increase the incidence of atherosclerotic diseases, but unfortunately the authorities looked on a substantial rise in the consumption of this type of food as an important political objective. Arguments about the real significance of preventing the major nutrition-related diseases were neglected. Now that the future development of agriculture and food is under discussion, however, the mass media are giving higher priority to educating the general public on food and nutrition.

In the case of food, the new economic policy led to increasing imports of coarse cereals and other feedstuffs necessary to raise meat production. This resulted in a growing trade deficit, which in turn forced the Government to raise food subsidies to keep retail prices stable. An attempt in 1976 to raise retail food prices led to social unrest and was abandoned. In 1980 the daily amount of food energy available reached 3600 kcal (15 062 kJ) per head. While in 1950 only 25% of total energy came from animal products, in 1980 the figure was 36%.

The collapse of the food market in 1980 was one of the main causes of the considerable political destabilization that ensued. In 1981 the Government agreed with the trade unions to introduce food rationing, and medical experts in nutrition played an important advisory role in the preparation of this agreement. They based food rationing on recommended dietary allowances, and wide public knowledge of their involvement had the political benefit of contributing significantly to public acceptance of rationing. It also set a precedent for further participation by medical experts in the implementation of food policy.

Research at the National Institute of Food and Nutrition pointed to a considerable increase in mortality from CHD. The suggestion that one of the most important causes had been the increase in the consumption of animal fat led to controversy, since many people suspected the authorities of using this as an excuse for not supplying enough meat and fat to meet demand. At the same time, both the Government and the public were beginning to take more interest in the possibility of preventing CHD through dietary measures.

After 1981 the authorities paid more attention to changing food consumption patterns in accordance with nutrition principles. An interdisciplinary group of experts was organized to advise the Central Planning Commission, and proposals on desirable food consumption patterns were developed for national food production projects. In addition, improved ways of disseminating information about food and nutrition were developed and, through the Prime

Minister's office, experts prepared a project for a long-running national health education campaign to improve nutritional habits and prevent diseases of major public health importance. Unfortunately this campaign was never implemented because of political destabilization and numerous changes in the Government.

A radical political change occurred in 1989, followed by a profound reorientation of the national economy. The constitution was changed, political pluralism was introduced, a new Government was formed by the former opposition, and a market-oriented economy was introduced.

In this new situation the preparation of a nutrition policy was neglected. This does not necessarily mean that the new Government rejected nutrition policy, but simply that policy-makers were totally preoccupied with the radical overhaul of the political and economic systems. Neither do these obstacles in the path of a nutrition policy mean that there is no chance of introducing such a policy in future. On the contrary, work is in hand to establish a national health programme, and a national health education campaign has been started, the intention being to approach nutrition policy within the national health programme.

In view of the multifactorial nature of nutrition-related diseases, tobacco use and alcohol consumption have been included as factors potentially contributing to CHD mortality. The link between a reduction in the consumption of animal fat, alcohol and tobacco and a reduction in CHD mortality has been used as an argument for the significance of these factors in preventing CHD.

The mass media have been very helpful in informing the public about food and nutrition. Each year about 60 radio and television programmes are broadcast on these topics and some 30 articles published in the press. The abundant correspondence that these programmes and articles have generated reveals great public interest in the prevention of nutrition-related diseases, though some people have blamed the media for helping the Government to limit the supply of food.

In general, however, the bureaucracy at all levels takes little interest in nutrition, and economic and political arguments are frequently raised against proposals for a modern approach to food policy. Even so, several new nongovernmental organizations concerned with food safety and the prevention of nutrition-related diseases have been created. These are rapidly expanding into the fields of health education and are trying to exert some influence on the bureaucracy to support the implementation of their projects. They are expected to be helpful in the implementation of nutrition policy in future.

Gaining political acceptance today

Since the Second World War, health professionals have been the main advocates of a food and nutrition policy. At first the State Institute of Hygiene and later (from 1963) the National Institute of Food and Nutrition were the principal health services institutions coordinating this activity. Their initiatives were supported by the Ministry of Health and Social Welfare. Some agriculture and food technology professionals constituted the main opposition, supported by the ministries concerned with agriculture and food processing. When conflicts occurred, the central political authorities became involved and health professionals then had little chance of success.

The gain in influence on food and nutrition policy by health professionals in recent years has led to the decision to promote a modern nutrition policy. Two intersectoral conferences on the importance of nutrition policy in health promotion have been held with the participation of the national administration and representatives of political parties. These have been followed by several meetings of health and agriculture professionals in different districts of the country. Nongovernmental organizations interested in improving food and nutrition policy have also been involved, and a mass media campaign has explicitly focused on the promotion of modern nutrition policy.

Towards a nutrition policy

Actual achievements in the development of nutrition policy include a nutrition information system, which is based mainly at the National Institute of Food and Nutrition. Analyses of the nutrition situation are conducted annually, based on data from food balance sheets and on the results of household budget surveys. Data from vital statistics and epidemiological studies are also collected and analysed for health impact. Nutrition reports are prepared periodically and transmitted to the political and administrative authorities.

There are national recommended nutritional allowances, and Poland is one of the few countries where recommended allowances are also expressed in food items. Objectives are formulated in both nutrient and food terms.

There is still no national nutrition council or similar organization that could coordinate nutrition policy. The National Institute of Food and Nutrition plays an advisory role in cooperation with other bodies advising on nutrition.

There has been a national agricultural policy for a long time, aimed at increasing agricultural production and self-sufficiency in food. The goals and measures of this policy have been subject to change depending on the political situation.

Until recently the Government decided on the retail price of food and on prices paid to farmers. Since August 1989 it has ceased to control retail prices. In 1990 most of the subsidies on food were removed and only low-fat milk, low-fat cottage cheese and baby food are still subsidized.

Mass catering is poor and deteriorating, despite a great need for it.

Economic and political considerations have been the basic factors determining food manufacturing policy. The influence of health experts has been limited.

Nutritional labelling applies only to baby food and dietetic foods. Legislation is in preparation that will cover a wider range of foodstuffs.

The educational and primary health care systems are not sufficiently involved in the prevention of nutrition-related diseases. Nevertheless, some progress is expected since doctors are fast becoming more interested in preventing atherosclerosis.

There is a developed system of nutrition education for professionals in agricultural universities. Nutrition education in medical schools is being improved and nutrition education of the public is developing well.

Food quality regulations exist, and there are quality standards and an inspection system for quality control. Under Ministry of Health and Welfare regulations, margarine and baby food are fortified with some vitamins.

These activities and structures are the basis for developing a nutrition policy. Once the political situation is more stable, it can be expected that further progress will be possible.

Hungary

Hungarian nutritionists have been working for about a decade on developing a nutrition policy that meets Hungarian needs and internationally agreed principles. As a result, several elements of such a policy have been developed, although finalizing the whole system is still a task for the future. These elements are set out below, followed by an outline of the steps to be taken.

Workshops on nutrition policy, allowing opportunities for discussing issues, for changing opinions and for reaching conclusions, provide the organizational background. They are conducted by the Committee on Food Science of the Department of Chemical Sciences of the Hungarian Academy of Sciences, the National Institute of Food Hygiene and Nutrition, the Central Food Research

Institute, the research institutes of the food industry, and the Hungarian Society of Nutrition.

Elements of the nutrition policy that concern the whole population

The first dietary guidelines were drawn up by the National Institute of Food Hygiene and Nutrition and by the Society of Nutrition in 1987. These easily intelligible guidelines promote:

- a varied diet cooked in different ways
- a reduced salt intake
- a decrease in fat consumption
- avoidance of sugar and sweets
- an increase in the consumption of fruit and vegetables
- consumption of more brown bread and potatoes
- four or five meals daily
- no alcoholic drinks
- sufficient exercise and nonsmoking
- the achievement and maintenance of a suitable body weight.

The guidelines also contain dietary advice for attaining these goals, setting out various types of food to be chosen for various meals. The basic concept of the recommendations is that proper nutrition does not mean the prohibition of any meal or food but a preference for some or a decrease in the consumption of others, as appropriate.

Unfortunately, even though the guidelines were prepared for the public, people were not well enough informed about them. Apart from the professional journals of the food industry and public health, only two magazines (albeit with wide circulations) published the guidelines, and it was not possible to ensure their availability in doctors' consulting rooms, hospitals, pharmacies or the larger food shops.

The food industry has produced several products that conform to the guidelines. For example, the dairy industry has introduced items with lower fat, salt and sugar contents, and the milling and baking industries have introduced fibre-rich products. The frozen food industry has an important role in vegetable and fruit consumption, but access to these products is uneven and often difficult. Only a limited number of people can afford the high prices of deep-frozen products.

Food and nutrition information

On the basis of data from foreign literature and Hungarian experience, new recommended daily allowances were developed and issued in 1988. These cover considerably more nutrients than formerly and the recommendations are given according to age, sex and – in the case of adults – occupation. They are indispensable for experts in catering and health in planning and evaluating nutrition for these population groups.

The first national nutrition survey was prepared and carried out by the National Institute of Food Hygiene and Nutrition in 1985–1988. It covered the whole population by county, according to age, sex and place of residence, and included 24-hour nutrition recall and questions on social conditions and clinical examinations. This survey was an essential part of the development of nutrition policy and serves to target interventions.

Nutrition education

School curricula have not traditionally covered healthy lifestyles, disease prevention and nutrition. The first sign of change was a post-graduate training course initiated and supported by the American–Hungarian Friendship Forum, whose aim was to provide material on nutrition to biology teachers for use in their work. The Minister of Education has been sympathetic to suggestions for introducing a formal educational programme along the same lines.

The National Institute of Food Hygiene and Nutrition has prepared several books, booklets and educational articles, and expresses its opinions regularly in newspapers and journals and on radio and television. It has also helped the National Institute of Health Protection to compile leaflets and films. This has not proved enough, however, and extreme theories about nutrition have filled the vacuum, receiving wide publicity and adversely influencing the views of the public.

Food production, the food trade and public catering

Ingredients are increasingly listed on food labels but not their quantities. It is compulsory to declare artificial sweeteners, additives such as vitamins and minerals and other substances such as high concentrations of soya in meat products.

Measures have been taken to implement the nutrition guidelines in public and school catering, but their success has been limited by financial constraints.

How should a Hungarian nutrition policy work?

The present economic situation and the widening gap between prices and incomes do not provide a favourable climate for influencing the

food industry and public nutrition or for pursuing the goals of a food and nutrition policy. Even so, attempts must be made to take advantage of the opportunities that will gradually present themselves in the course of economic consolidation. These concern the food industry, public awareness and nutrition research.

It is reasonable that the Department of Medical Sciences of the Hungarian Academy of Sciences should take over a greater part of this work. The health and food industry research institutes and associations are responsible for working out the details of the strategy and for considering the tactical steps. The ministries' roles are to gather information about every phase of development and to consult and promote implementation by administrative decisions. Implementation demands the active cooperation of all participating organizations.

Other prerequisites include:

- creating a data bank on the detailed composition of all types of food to provide the necessary information for food labelling;
- ensuring cooperation among the health, agricultural and food sectors;
- taking more advantage of the opportunities for increasing the production of raw materials and food with better nutritional and physiological composition, for widening the choice of products available, for informing consumers and for developing plant and animal species and food preparation technologies;
- educating nutritionists;
- improving the nutrition education of health professionals;
- including knowledge about health and nutrition in school curricula, not necessarily as a separate subject but in connected with other biological themes;
- making information about nutrition more widely available to the public; and
- regularly monitoring the effectiveness of health intervention programmes and relevant political measures and adjusting the policy as necessary.

Finally, without a national food and nutrition policy, no one can expect real improvement in the health status of the population or the development of a healthy generation in the future.

Turkey

Turkey's fifth five-year plan, covering 1980–1985, admitted that no improvement had been observed in the nutritional problems set out in the previous five-year plans.

A food and nutrition planning and policy project was prepared by the Ministry of Agriculture in coordination with the United Nations Children's Fund (UNICEF) in 1980. To determine the changes in the pattern of food consumption since 1974, a second food consumption and nutrition survey was conducted in 1984.

A nutrition education campaign was begun under an Assistant Prime Minister in 1986 to improve public knowledge about nutrition. Various workshops were organized for home economists, teachers, health officers and people working in mass catering. Messages about nutrition on television and radio and in the newspapers were aimed at changing the population's bad nutritional practices. Frequent messages about nutrition on television were observed to be effective in persuading people to change their eating habits. For example, the consumption of lentils went up and nutritional knowledge (especially in women and children) improved following a series of messages on television about the use of lentils in dishes prepared for different age and sex groups.

Turkish radio and television adapted the American children's programme "Sesame Street" to include further information on children's eating habits. Evaluation showed that these messages had a positive impact on the food choices made by children aged 3–6 years.

Fortification of food was included in the Ministry of Health's programmes for 1987 and 1988, and in June 1989 a multisectoral meeting organized by the Ministry to discuss this topic drew the following conclusions:

- the consumption of iodized salt should be promoted through effective and continuous education of the people by health workers in community health centres and by messages in the mass media;
- legislation should be prepared to permit the fortification of bread with iron, riboflavin and perhaps zinc; and
- incentives should be provided for the production of enriched bread.

Food consumption patterns

Bread is the main item in the national diet, supplying about 40% of adults' daily energy intake. Meat, especially lamb, has traditionally

been a main ingredient of Turkish cuisine but has recently lost its position as a staple food for the majority of the population because of its increasing cost. Yoghurt is the most widely and frequently used milk product, produced by simple technology in most households. Fresh vegetables and fruit also have an important place in the Turkish diet.

There are regional variations in the type of fat used: olive oil is used in the west and south and animal fat in the east and centre of the country. Margarine has begun to be substituted for animal fat in recent years.

Protein contributes around 15%, fat around 25% and carbohydrates around 60% of energy in the diet.

Impact of taxation, subsidies and prices on choice of food

Cereals, sugar and tea and some industrial crops are subsidized, and pulses have been subsidized since 1987. This system guarantees minimum prices to be paid to farmers. The price of bread is controlled by the local authorities.

The price of sugar is regulated by the Turkish sugar industry. Sugar is the main ingredient of sweet food products, tea and soft drinks. Of all the commodities advertised through the mass media in 1989, food and drink comprised the leading item; most food advertised on television either contains sugar or is margarine or vegetable oil, and many drinks contain cola nuts. The increasing consumption of these items as a result of advertising has two types of negative impact on nutrition. First, overconsumption causes obesity and, second, the money spent on them prevents people on low incomes buying food with a higher nutritional value.

State support for milk production has a positive impact on the choices of food. Since the consumption of milk is very low, which may be one of the causes of riboflavin deficiency in children, an increase in its consumption as a result of price regulation positively affects the nutritional status of the population.

Tea is more frequently drunk, especially in low socioeconomic groups. Drinking tea with meals containing mostly foods of vegetable origin reduces the bioavailability of dietary iron, which may be one of the causes of anaemia in children and in women of childbearing age.

Taxes on food items vary. Value-added tax on basic foods such as cereals, pulses, sugar, meat, poultry, eggs, milk, white cheese, vegetables and fruit is only 3%, whereas it is 10% on processed cheese, meat products, biscuits, canned foods, soft drinks and all pastry items. This taxation policy has a positive impact on people's food choices, especially among low-income and health-conscious consumers.

The high rate of inflation during recent years has affected the buying power of families, especially those on fixed incomes. They have become more dependent on bread, cereals and seasonal vegetables, while high-income families eat more food with a high fat content such as meat and meat products, eggs, cheese and processed food with a high salt content. The consequences are increased malnutrition among the poor and higher rates of hypertension and CHD among the more well off.

Formulation of a nutrition policy for the year 2000

In 1989 the Ministry of Health organized a multisectoral meeting on health policy at which the following strategies and policies on nutrition and food safety were formulated.

A National Nutrition High Council should be established to implement and apply preventive measures in nutrition. It should consist of high-level representatives of relevant ministries, the State Planning Organization, the Science and Technology Council and relevant university departments under the chairmanship of an Assistant Prime Minister.

A food law should be promulgated to ensure people's rights in relation to disease prevention and food economics and to provide the basis for regulating food products dangerous to health.

Systematic national nutrition and health, food consumption and food safety surveys should be conducted periodically.

National training programmes should be developed for people responsible for educating the public about nutrition and for those working in food regulation and food safety. The mass media should be used effectively in nutrition education, and campaigns on this topic should be implemented effectively and continuously.

Measures should be taken to increase the production of animal products rich in protein, such as milk, eggs, poultry, fish and meat. The subsidy on the production of milk should be extended.

A high-protein food formula should be distributed to poor families with small children, and mothers should receive continuing education about feeding children.

Information on the use of iodized salt to prevent endemic goitre should be effectively and continually communicated to the public by health personnel and the mass media.

An effective family planning programme should be undertaken to improve the socioeconomic and nutritional status of the population.

The public, especially people in the higher socioeconomic groups, should be informed about the health hazards of consuming too much salt, fat and refined food.

Part III

Prologue to the future

Dilemmas and issues for Europe

Nancy Milio and Elisabet Helsing

The reports in this volume, on the experience of and prospects for a food and nutrition policy in many countries, suggest a number of challenges for the future in the European Region. There is a growing awareness that national dietary patterns are changing, but not fast enough or consistently enough to deter so-called disabled longevity – a longer life but with higher morbidity from preventable chronic and acute diseases (50). This has led to calls for broader, integrated and intersectoral approaches to policy development, such as that made by the Forty-sixth World Health Assembly in resolution WHA46.7 (51) in 1993.

Another major challenge is the increasing influence, impact and complexity of policy-making by the EU, and of its free-market nature. So far there has been little open discussion in the EU of the possible effects on the health of European populations of the vast and unguided food production and processing capacity within its borders.

Efforts to meet these challenges will require renewed and more vigorous collaboration between different levels and sectors. There are also some dilemmas ahead in the potential conflicts:

- between national and EU priorities, as foreseen by the Netherlands (see below);
- between a free-market and a more regulated approach to nutritional goals as faced by Denmark, Germany and Sweden;
- between organizing leadership under nutrition and health rather than food safety as in Norway, for example, where the budget of the NNC is less than 5% the size of the food safety allocation;
- between the demand for increasing productivity on the one hand and environmental restraint and sustainability on the other; and

- between the health-giving potential of bioengineering and the dangers of unknown side effects.

Among other complex and predominating issues are whether economic and other changes in the south of Europe and the Mediterranean area will lead to their reproducing the relatively less healthy aspects of northern European diets. Further, will the economic liberalization in the countries of central and eastern Europe and the newly independent states of the former USSR and their eventual linkage to the single market compound the nutritional problems caused by their heavily animal-based national diets? It is crucial here to ask what kinds of mechanism can address these issues and whether there is a political willingness to employ such mechanisms where they exist.

Denmark

In the hope that market approaches will hasten changes toward nutritional goals, Denmark plans to follow a rather traditional route in conducting national campaigns, through its National Consumer Agency, to promote the diet and nutritional health of young children (52); in addition:

In an attempt to ensure that nutritious food is developed, the authorities are attempting to cooperate with food producers in product development by, for example, offering public subsidies for companies that experiment in new products that encourage people to choose healthier food .

The most unconventional programme is the effort to improve food in hospitals and other institutions, which includes flexibility and individual choice of meal times and foods, and offering the opportunity to participate in preparing meals (52).

Germany

In Germany, where over 80% of all premature deaths are due to nutrition-related diseases, nutritional knowledge is not widespread in spite of high general educational standards. Plans are afoot to develop a nutrition counselling system and improve the coordination of agencies that provide nutrition information, including voluntary societies, professional associations and public agencies. This is to be supported by the ministries responsible for health, food, agriculture and forestry. The impetus for this stemmed from a 1989 law requiring that health insurance societies (to which 95% of people belong) provide services to promote health.

Thus dietary counselling is now a financially supported health service. Coordination is needed to ensure that the information provided to the public is correct and consistent.

The Netherlands

Current planning and discussion documents specify some of the challenges to nutrition policy development in the Netherlands, where dietary improvement is not as rapid as desired. The National Nutrition Council has determined that other means of achieving changes in behaviour, in addition to education and guidance, should be used to improve the national diet. The Council reviewed the theoretical and empirical knowledge on determinants of food behaviour and advocated a more integrated and intersectoral approach to food and nutrition policy. Alongside education and guidance, structural measures such as price interventions and a so-called enabling policy would also be given a place. The Netherlands Scientific Council concluded that (53):

Other assessments of the policy-making environment of the future foresee that: the administrative tier in Brussels inevitably will assume more powers from the national domain ... traditional policy-makers will no longer be available or, at least will have their impact blunted. EC members will increasingly have to “play the European game”, both in the shaping of Community policies and when taking advantage of opportunities provided by the internal market.

In addition, with implications for the nature of nutrition policy, “... EC members [would] be increasingly obliged to enter into policy competition against each other in order to attract labour, capital and technology to their particular territories” (53).

In other words major policy-making, including that affecting food and nutrition, will have to be collaborative within and between countries, taking into account the propensity of policy-makers to design policies that attract investment regardless of whether or not they are health promoting.

Sweden

In adopting a classical market approach for the 1990s in line with its decision to enter the EU, Swedish policy-makers hope to reap its benefits, such as a wider choice of products and larger supplies at more reasonable prices. The free-market approach may also pose problems for national nutrition; for example, the pricing structure may not necessarily

correspond to what is most desirable from a public health point of view: lower prices for healthier products.

Consumers may not necessarily be given sufficient information to make appropriate choices; food advertising often gives misleading and confusing information that makes it hard to choose a healthy diet. Swedish plans therefore include active information and educational efforts to shift dietary habits towards the goals set out by the National Food Administration. The main aim is to reduce the inequity in health between the various sectors of the population. The new National Public Health Institute will draft a national policy for preventive action on diet, physical exercise and health, with support for professional training. It will coordinate intersectoral health promotion and preventive health care, identify the need for regional and local activities and take appropriate initiatives. It is also to evaluate and monitor the effects of measures to improve diet and exercise.

Eastern countries of the European Region

The western European habit of regarding the countries of central and eastern Europe and the newly independent states of the former USSR as a homogeneous bloc is slowly giving way to a better understanding of these countries' differences in tradition, values, political and administrative structures, and food cultures and dietary patterns. The countries, however, share one unfortunate pattern: high mortality from diet-related diseases and little understanding of the relationship between diet and health. The daily struggle to get more than the basic foods in a centrally planned economy has made the general population and policy-makers alike wary of the food issue, but because of an acute shortage of scientific expertise in this field there is very little information about what people actually consume and what their nutritional status actually is. In the absence of fact, myths thrive and contribute to shaping policies that may be detrimental to health in the long run. A firm belief in the merits of animal protein, for example, leads to overemphasis on the need to build up a meat and dairy industry, thus compounding the problems associated with a too-high intake of animal fat.

Lack of facilities and inadequate methodology produce low-quality studies that often state that the population is severely deficient in vitamins. This inevitably leads to a call for the production of vitamin and mineral supplements, while the need for refrigeration and warehouses that could improve the supply of fresh produce goes unnoticed.

A probably well meant wish to protect vulnerable groups (and to produce profitable goods) has led to free donations of infant formula far in excess of the real need, thus contributing to undermining the national

production of human milk, which is both cheaper and of better quality than the artificial variety.

There is an acute need for better understanding both of the science of nutrition and the workings of the food system, especially in the newly independent states.

Policy issues

Whatever the scope and approach to food and nutrition policy-making, several major issues are apparent from experience to date. These will require attention by national and EU policy-makers and planners if policy implementation is to be improved. Some issues are organizational in nature: planning and coordination, integration into the health services system and other policy sectors, local infrastructure development and decentralization. Other issues are substantive: information and education, the power of the free market and social equity.

The tasks call for establishing priorities and allocating responsibility. A national body, endowed with sufficient authority, prominence, political power and resources, must be given the responsibility to carry out or delegate planning, to negotiate coordination and to monitor and evaluate. Further, it should build collaborative ties with food regulation authorities, which often have the funds, authority and organizational infrastructure to influence such sectors as agriculture, environment, taxation, food manufacture and marketing, mass catering, importation and, not least, local implementation through education and regulation. The food regulation authorities, for their part, need appropriate tools. For example, to establish hazard analysis critical control points, there is a need for dietary data to indicate where the critical points for control might be. To carry out labelling and set standards the food regulation authorities need food composition tables, the establishment of which are a typical task of food and nutrition scientists.

Another important issue is the integration of nutrition and food objectives throughout the health and agriculture system. This calls for the information and skills to work at the local level with, for example, farmers, grocers, the media, schools, and public and institutional catering services. This work could be done by properly trained health personnel such as environmental health staff, food inspectors, other public health and welfare staff and child care personnel.

The purchasing power of government catering facilities at all levels should be recognized and used to promote the implementation of food and nutrition policy. For example, health, welfare and educational authorities can promote the planning of healthy menus and food preparation with their suppliers and kitchen management. Start-up grants for

local farmers to develop light processing facilities for locally grown foods could create local suppliers, lower transport, packaging and environmental costs, and provide new and stable sources of income for farmers.

The development of a local infrastructure becomes increasingly important when national bureaucracies retain less fiscal and regulatory control over local public and private organizations. The flow of influence from central to local authorities and from government to private structures will increasingly require the use of educational and informational feedback rather than mandated action. How to deal with these realities of decentralization – local control and freer markets – will have to be addressed by nutrition policy planners within the context of their jurisdiction.

A critical element in the food and nutrition market-place is the growing role of the mass media in information, education and consumer behaviour, especially among younger people. Coming mainly from commercial and international sources, messages about nutrition are conveyed explicitly (through advertising and news reports) and implicitly (through modelling behaviour) in the press and on television. These may be misleading, if not inaccurate, and usually do not give other points of view. The new fact of global telecommunication should be faced at the policy level to determine what approach, if any, to take. Among the options for action are media monitoring and content analysis with public reporting of findings, and media literacy education, all of which have been done to some extent in Finland and Norway. Other options include regulation of advertising, as attempted in Norway, the use of so-called counter-commercials, and joint educational seminars and collaboration among journalists and nutrition and health personnel, as is being planned in Germany.

A final important issue in food and nutrition policy-making is social equity. This concerns the distribution of resources to make healthier diets easier to choose, and the making of policy to ensure that costs and benefits are fairly shared. This requires that recommended foods be readily available at attractive prices, and that knowledge about the relationship between diet and health is equitably distributed. Too often scientists, being amateurs as educators, are unable to reach beyond people at their own educational level.

The diet-related health and economic effects on social and occupational groups, geographic regions, and institutional sectors should be monitored so that equitable adjustments can be made. All European countries have the tools for this type of rudimentary monitoring in their household budget surveys.

As long as there are indications of a slow-down or of ambiguous trends in dietary and health improvements (such as a change of only some elements of the diet, an increase in obesity or a continued high premature mortality from diet-related diseases), as well as uneven

progress among social groups and regions, food and nutrition policy will need sustained attention. National and international trends will have to be monitored; collaboration with selected organizations willing to pursue their own interests in ways that are also consistent with public health interests will have to continue; and central and local bodies will have to be created to promote, coordinate, evaluate and publicly report on policy effectiveness. In this way, the economic prosperity that will come to the new Europe can be accompanied by improvements in the health of its people.

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Annex 1

Cultural modelling: a new basis for education of the public

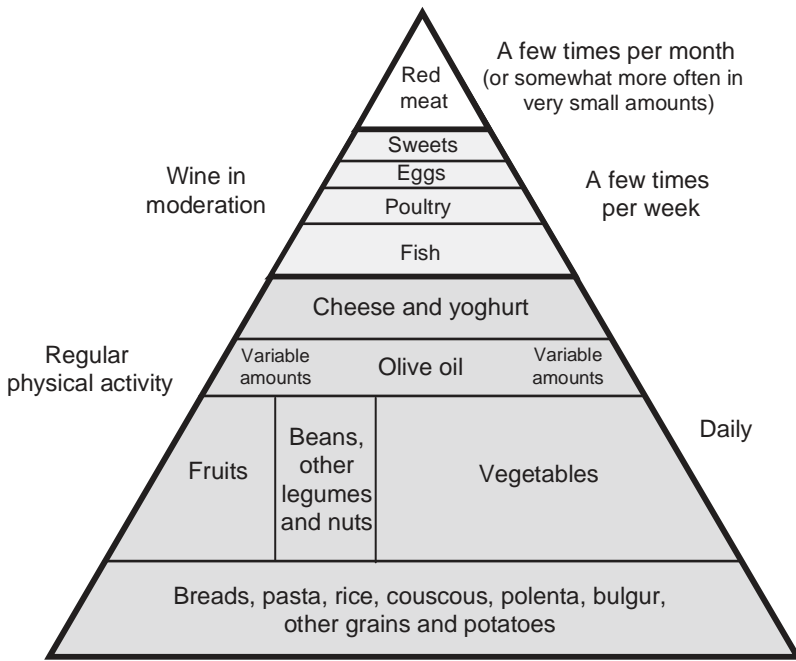
In 1992, the joint FAO/WHO International Conference on Nutrition adopted a World Declaration on Nutrition and a Plan of Action for Nutrition:² a very detailed and elaborate document, laying down the principles for the work their Member States wish to see the two organizations undertake, as well as the work they themselves pledge to undertake, in the area of nutrition. It places great emphasis on informing and educating the public about nutrition. In its 22 pages, the document mentions this issue no fewer than 66 times.

At the same time, disturbing proof is emerging of what many nutritionists have long suspected. Nutrition education in its traditional form, such as dietary guidelines for the public, are – with some notable exceptions – poorly understood and not easily acted on.

A new approach to communicating nutritional messages is clearly called for. This is why the WHO Regional Office for Europe has joined Oldways Preservation & Exchange Trust and the FAO/WHO collaborating centre for nutrition at the Harvard School of Public Health in exploring the possibilities of so-called cultural modelling, whereby dietary advice is based on known food patterns in populations enjoying above-average health. The dietary guidelines summarized in the traditional healthy Mediterranean diet pyramid (Fig. 1) are an example of such cultural modelling. They are fundamentally different from other guidelines currently in circulation. This continuing experiment in new ways of developing dietary guidelines also invokes the active partnership of a number of distinguished cooks, scientists, food producers and manufacturers.

² *World Declaration on Nutrition. Plan of Action for Nutrition.* Geneva, World Health Organization, 1993 (document WHO/NUT/93.2).

Fig. 1. The traditional healthy Mediterranean diet pyramid



The working hypothesis is that, rather than trying to construct theoretical dietary guidelines, the process could be turned around. The starting point for the process of developing guidelines would thus be the outcome of natural experiments, involving different dietary patterns, that lead to more or less healthy populations. The first step would be to search globally in time and space for exceptionally healthy populations. If such populations could be properly identified, the next step would be to use all available means – research into dietary patterns, health, culture, history and culinary tradition – to get to know as much as possible about the diets and lifestyles of those populations. This should result in a larger body of knowledge, over longer periods time and with a larger number of subjects, than any intervention study would have been able to generate. The resulting dietary guidelines should then combine contemporary culinary wisdom, modern culture and nutritional science in its clinical, biological and epidemiological aspects.

The first population that qualified for a pilot trial of this process was, not surprisingly, that of the Mediterranean area. The process of describing the diet in that area has been long and arduous and still

continues, since details of the dietary patterns and especially of health in this part of the world are not complete.

The Mediterranean diet³

This preliminary concept of a pyramid to represent a healthy, traditional Mediterranean diet is based on the dietary traditions of Corfu, Crete, much of the rest of Greece and southern Italy around 1960, and structured in the light of current nutrition research. The selection of these regions and that period as a basis for the design follows from three considerations:

- recognition that the rates of chronic diseases for these populations at that time were among the lowest in the world and adult life expectancy among the highest, even though medical services were limited;
- the availability of data describing food consumption patterns in those areas at that time; and
- the convergence of the dietary patterns revealed by these data and current understanding of optimum nutrition based on epidemiological studies and clinical trials worldwide.

Variations of this diet have traditionally existed in southern France, other parts of Italy and in parts of Portugal, Spain, North Africa (especially Morocco and Tunisia), Turkey, the Balkan region and the Middle East (especially Lebanon and Syria). The diet is closely tied to traditional areas of olive oil production in the Mediterranean region.

Given these carefully defined parameters of geography and time, the term traditional Mediterranean diet must be understood as shorthand for the healthy traditional diets of these regions at that time.

The design of the pyramid is based not merely on the weight or percentage of calories that foods account for in the diet, but on a blend of these that is meant to give relative proportions and a general sense of frequency of servings – as well as an indication of which foods to favour in a healthy Mediterranean-style diet. The pyramid describes a diet for most healthy adults. Whether changes would need to be made for children, women of reproductive age or other population groups is an issue that needs further study.

³ The content of this part of the Annex originally appeared in a poster issued by the Oldways Preservation & Exchange Trust, the WHO/FAO Collaborating Centre for Nutrition at Harvard School of Public Health and the WHO Regional Office for Europe.

A principal objective of the pyramid is to foster a dialogue within the international scientific, public health, food and agricultural, government and other communities as to what specific elements and configurations of the traditional diets of the Mediterranean region should be regarded as healthy.

For North Americans, northern and eastern Europeans and others who wish to improve their diets, this model provides a highly palatable and healthy framework for change. Equally positive results may be obtained either by entirely adopting a Mediterranean-style diet or by alternating meals based on the Mediterranean model with those inspired by healthy dietary traditions of other cultures. For those living in the Mediterranean region, the pyramid provides a basis for preserving and revitalizing, within a modern lifestyle, centuries-old traditions that contribute to excellent health and a sense of pleasure and wellbeing and are a vital part of the collective cultural heritage.

Characteristics of healthy Mediterranean diets

Dietary data from those parts of the Mediterranean region that in the recent past enjoyed the lowest recorded rates of chronic diseases and the highest adult life expectancy show a pattern such as that set out below. The healthiness of this pattern is corroborated by epidemiological and experimental nutrition research. The average amounts given are in most cases intentionally nonspecific, since variation within this pattern is known to have been considerable. In summary, the historical pattern includes the following (with several parenthetical notes adding contemporary public health perspectives):

1. an abundance of plant foods, including fruits and vegetables, potatoes, bread and grains, beans, nuts and seeds;
2. emphasis on a variety of minimally processed and, wherever possible, seasonally fresh and locally grown foods (which often maximizes their health promoting micronutrient and antioxidant content);
3. olive oil as the principal fat, replacing other fats and oils (including butter and margarine);
4. saturated fat providing no more than 7–8% of energy, with total fat ranging from less than 25% to over 35% of energy;
5. daily consumption of low to moderate amounts of cheese and yoghurt (low-fat and non-fat versions may be preferred);

6. weekly consumption of low to moderate amounts of fish and poultry (recent research suggests that fish should be somewhat favoured over poultry) and up to 4 eggs (including those used in cooking and baking);
7. fresh fruit as the typical daily dessert, sweets with significant amounts of sugar (often as honey) and saturated fat being consumed not more than a few times per week;
8. red meat a few times per month (recent research suggests that if red meat is eaten, its consumption should be limited to a maximum of 340–450 g per month; where the flavour is acceptable, lean versions may be preferable);
9. regular physical activity at a level that promotes a healthy weight, fitness and wellbeing; and
10. moderate consumption of wine, normally with meals: about 1–2 glasses per day for men and 1 glass per day for women (from a contemporary health perspective, wine should be considered optional and avoided where consumption would put the individual or others at risk, including during pregnancy or while driving).

Contemporary perspectives on traditional Mediterranean diets

Plant foods at the centre of the plate

Around 1960, the traditional diets of the Mediterranean region were overwhelmingly based on foods from a rich diversity of plant sources, while foods from animal sources were more peripheral. In North Africa, couscous, together with vegetables and legumes, formed the centre of the diet. Throughout southern Europe, pasta, rice, polenta and potatoes, together with vegetables and legumes, were the centre of the plate. In the eastern Mediterranean area, bulgur and rice, together with vegetables and such legumes as chickpeas and beans, constituted the core of many meals. Throughout the Mediterranean region, bread was, and remains, fundamental to the diet and is eaten and enjoyed without butter or margarine. A diet based on these traditional patterns is likely to be sufficient in all essential nutrients that we are aware of today, and might be expected to reduce chronic diseases as effectively as many of the food patterns recommended in current official dietary guidelines.

We are only beginning to understand the effects of numerous, possibly health-promoting micronutrients and so-called non-nutritive substances in foods from plant sources, let alone the complexities of their interactions. It is premature to predict confidently which plant foods, in what amounts, and in what interactive blends, are indispensable or otherwise; hence prudent dietary recommendations emphasize a large and varied intake of these foods.

A diet entirely of foods from plant sources needs careful attention to variety and quality to ensure a balance of micronutrients. Further, to maintain excellent health, significantly more care is required to address the special needs of women in the reproductive years. The ratio of plant to animal foods found in traditional Mediterranean diets – and the traditional diets of other regions such as parts of Asia – may therefore provide the best and safest strategy for good nutrition for most people. In addition, introducing a modest amount of foods from animal sources will enhance the palatability of the diet for many.

Foods from plant sources in the traditional Mediterranean diets were, for the most part, locally grown or gathered, seasonally fresh and often consumed raw or minimally processed. Again, given the emerging understanding of the potential protective character of dietary fibres, antioxidants, and other micronutrients and non-nutritive substances found in plant foods, this may be crucial to a proper appreciation of the health promoting mechanisms of these diets.

Consumption of sugar, which may displace foods containing larger amounts of micronutrients, was very low in the traditional diets of the Mediterranean region.

In addition, some traditional Mediterranean foods from plant sources typically used for flavouring – such as garlic, herbs and other condiments – might have health promoting properties that warrant further investigation.

Olive oil and total fat

Olive oil, high in monounsaturated fat and good source of antioxidants, is the Mediterranean region's principal source of fat. Given the low levels of chronic diseases and high adult life expectancy throughout much of the region in the 1960s, it appears that various levels of total fat (where the fat was mostly olive oil) can be associated with the excellent health seen in the region at that time. The traditional diets of southern France (Provence), Italy, Morocco, Portugal, parts of Spain, Tunisia, the Mediterranean coast of Turkey and elsewhere in the Mediterranean region in the 1960s usually show 30% or less of total energy from fat.

Data from Greece indicate that an intake of over 35% of total daily energy from fat can be compatible with good health, with saturated fat at 8% or below, polyunsaturated fat at about 3%, and the balance from monounsaturated fat in the form of olive oil. This was, for example, the profile of fats in the diet of Crete in 1960, prior to a significant shift in much of the Mediterranean region towards increasing amounts of meat and dairy products.

In the early 1960s, heart disease rates in Greek populations were found to be nearly 90% lower than those measured among cohorts in the United States (for ischaemic heart disease in men aged 50–54, Greece had 48 deaths per 100 000 population compared with 466 in the United States). At this same time, rates of other chronic diseases were similarly low throughout Greece (breast cancer rates, for example, were one fourth to one third of those of the United States and almost as low as those of Japan), and Greek adult male life expectancy was the highest in the world. Further, the rates of most chronic diseases that are now thought to be diet related were lower in Greece than in other Mediterranean countries.

The conclusion seems to be that, for an active person with no weight problem, a higher-fat (over 35% of calories) Mediterranean-style diet is compatible with excellent health. Current scientific data cannot show if a diet with over 35% of fat coming mainly from olive oil, and much of the rest of the diet being fruit, vegetables and bread, is any worse for obesity in a sedentary population than a diet with an equivalent level of energy but with less fat. Given the excellent health profile of Greeks apparently following a traditional, higher-fat diet, and the prevalence of high-fat diets in many developed countries, this matter needs to be resolved.

Whether one adopts a lower- or higher-fat Mediterranean-style diet, however, olive oil should replace – not be added to – other sources of fat, especially butter and margarine, which were not part of traditional Mediterranean diets.

The recommendation of olive oil in preference to other plant oils is based on the following considerations.

High intakes of linoleic acid, the main polyunsaturated fat in many vegetable oils, may compete with omega-3 fatty acids in biochemical processes and enhance the tendency of blood to clot.

Some research has indicated that diets high in monounsaturated fats are less likely to lead to the oxidation of low-density lipoprotein, and this may reduce atherosclerosis or the formation of atheroma.

In numerous animal studies, diets high in polyunsaturated fats have promoted the development of tumours, although this has not been documented in human beings.

Mediterranean people have been using olive oil as their major dietary fat for many thousands of years, whereas polyunsaturated fats have been consumed at high levels on a wide scale for only a short time. Without evidence that lifetime exposure to high levels of polyunsaturated fats is safe, it is premature to recommend that these fats are as healthy or safe as a Mediterranean diet in which the major fat is olive oil.

Finally, olive oil contains many substances other than monounsaturated fatty acids and vitamin E, and some of these may also contribute to its apparent healthiness.

Other models?

Other populations with traditional low to very low levels of other plant oils in the diet – most notably those of eastern Asia – also have a lower risk of certain chronic diseases. This suggests that there is probably more than one cultural model for healthy eating, and that these models may differ substantially in levels of total fat intake and types of plant oil used.

Future research may determine whether two of the basic variations of the Mediterranean diet have equally good effects on health:

- the southern Italian model, with a high intake of complex carbohydrates and moderate intakes of olive oil, fruit and vegetables; and
- the Greek model, with higher intakes of olive oil, fruit and vegetables and a more moderate intake of complex carbohydrates.

Low to moderate consumption of dairy products

Dairy products from a variety of animals – goats, sheep, water buffalo, cattle and camels – principally in the form of cheese and yoghurt, were traditionally consumed in low to moderate amounts in most parts of the Mediterranean region. The use of small amounts of high-fat, full-flavoured cheese grated over pasta is an example of the Mediterranean approach to incorporating these items in a diet that minimizes the risk of chronic disease. In the early 1960s, consumption of cheese in Crete was a little over 91 g per week, with an additional 250 ml of milk per day, usually in the form of yoghurt. In Corfu during this period, consumption was 98 g of cheese and 70 ml of milk per week. In southern Italy in the 1960s, consumption was 63 g of cheese and 56 ml of milk per week.

In the entire Mediterranean region at that time, very little fresh milk was consumed and meals were normally accompanied by wine or water. The recent availability of low-fat and non-fat dairy products make possible the inclusion of somewhat higher levels of such

products in the diet with little likelihood of adverse consequences. Some full-fat dairy products, such as cheeses, can be enjoyed daily if the amounts are low.

There is insufficient evidence to judge whether live yoghurt cultures may have contributed to the traditional good health of the region, but this deserves further research.

Sparing use of fish, poultry, eggs and red meat

All foods from animal sources, and especially red meat, were used sparingly in the traditional Mediterranean diets, as reflected in Fig. 1. In 1960, the total amount of meat, poultry and fish consumed per person per week was, on average, 434 g in southern Italy, 371 g in Crete and 665 g in Corfu.

In rural Crete and much of the rest of Greece in 1960, red meat, mostly in the form of sheep or goat meat, was consumed only once every week or two. According to this pattern, if red meat is eaten at all in a Mediterranean-style diet, its consumption should not exceed 450 g per month. Where the flavour is acceptable, lean versions may be preferred. In general, meat in the traditional Mediterranean diet was leaner than much of the meat now familiar to consumers in industrialized countries.

Although the available data cannot be considered definitive, a substantial body of evidence now suggests that a high intake of red meat is associated with increased risks of CHD, colon and prostate cancers and possibly other cancers. At present, one cannot assume that the relationships are due only to the fat content of red meats; other factors may contribute to increased risk, such as carcinogens formed during cooking, proteins, cholesterol (largely contained in the lean component) or the highly available iron. Further, meat contains no fibre and no antioxidants, and fatty meat eaten in large quantities may displace plant-based foods that do contain these important elements. The essential nutrients contained in red meat may also be obtained from other sources. Consumed a few times per month, however, meat seems to pose little risk to health. Whether similarly low intakes of red meat are appropriate for children needs further consideration.

Fish consumption in the Mediterranean region in 1960 varied from 126 g per person per week in Crete to 420 g in Corfu. FAO food balance sheet data show that, in the same year, the corresponding figures for Portugal and Spain were 1057 g and 519 g, respectively. Both countries follow a traditional Mediterranean food and health pattern. In Japan, which now enjoys the highest life expectancy in the world, consumption of fish has ranged from 532 g to 672 g per week over the last 25 years (according to individual

dietary surveys; FAO food balance sheet data show even higher levels in recent years). These latter figures suggest a rationale for a more liberal use of fish in the diet, as is suggested by its position in the pyramid. This is corroborated by research indicating increased health benefits from moderate fish consumption.

The consumption of 3–4 whole eggs per week was also part of the traditional Mediterranean diet, including those used in baking and in prepared foods.

Wine in moderation and with meals

In the Mediterranean tradition (primarily in non-Muslim areas), wine was enjoyed in moderation, normally with meals and typically within a family context. Wine was sometimes mixed with water, and women often did not drink alcohol at all.

From a contemporary public health perspective, wine should be considered optional in the Mediterranean-style diet and avoided whenever consumption would put the individual or others at risk.

For men, moderation is defined as 1–2 glasses per day. Moderate wine consumption for men appears not only to lower the risk of heart disease but also to reduce overall mortality.

For women, moderation is generally defined as 1 glass per day. Nevertheless, research has suggested that even this modest amount may be associated with a small increase in the risk of breast cancer as well as with a decreased risk of heart disease. Pending further research, women may choose to exercise caution with respect to daily wine consumption, since breast cancer is a more important cause of death during middle age in some groups of women.

Physical activity and other lifestyle factors

Regular physical activity was a typical feature of the rural Mediterranean lifestyle in the 1960s, and is considered vital to maintaining good health and optimal weight.

Other diet-related lifestyle factors may also have contributed to the low rates of chronic diseases and high adult life expectancy found in the Mediterranean region in the 1960s. Those deserving serious attention include: sharing food with family and friends (an expression of the strong social support system and general sense of community that is typical of the region); the extensive amount of time spent relaxing over meals (offering a relief from daily stress); an insistence on well flavoured, carefully prepared foods; and the tradition of taking a siesta after lunch.

Annex 2

The Maltese Food and Nutrition Policy

Consumer and media interest in food and its impact on health has probably never been greater. This is perhaps understandable when science has made large strides in identifying factors associated with diseases that are highly prevalent in developed countries. It is now generally agreed that proper nutrition is central to the prevention and management of illnesses such as CHD, diabetes and some forms of cancer.

The participants at the First Conference on Nutrition in Malta, held in August 1986,⁴ reviewed available data on the food and health situation in Malta and concluded that the prevalence of noncommunicable diseases was high and that the dietary habits of the Maltese population needed to be improved.

Improving the eating habits of the population entails the dissemination of unbiased information about food and health, while ensuring that consumers are able to find and can afford food that is safe to eat and nutritionally appropriate. Health must therefore be a major criterion guiding decisions concerning the provision and production of food, and this requires collaboration amongst the many public and private sectors involved.

The participants at the Second Conference, held in October 1988,⁵ made even stronger recommendations for the improvement of the nutritional

⁴ *Formulation of a nutrition policy. Summary of the First Conference on Nutrition in Malta, Floriana, Malta, 25–30 August 1986.* Copenhagen, WHO Regional Office for Europe, 1986 (document MAT/NUT 001).

⁵ *Implementation of a nutrition policy. Report on the Second Conference on Nutrition in Malta, Rabat, Malta, 24–27 October 1988.* Copenhagen, WHO Regional Office for Europe, 1992 (document MAT/NUT 001(2)).

status of the population, and highlighted the need for political support for action in the field of food and nutrition.

The Maltese Cabinet studied these proposals and, seeing that they were in line with the Government's efforts to prevent noncommunicable diseases and to maintain the good health of the population, endorsed them as a framework for a national food and nutrition policy. The aims and objectives outlined in this policy provide a clear direction for action. To ensure that action was actually taken to improve the nutritional status of the population, terms of reference were drawn up for a multisectoral National Advisory Committee on Food and Nutrition (NACFN). To further support this structure, the Nutrition Unit within the Department of Health was delegated as the secretariat of the NACFN.

Aims and objectives

The national food and nutrition policy has two main aims:

- to assist the Maltese population in adopting a healthy dietary pattern; and
- to take health into consideration in the provision and production of food.

The aims of the food and nutrition policy will be achieved through the following objectives:

- the establishment of the nutrient goals agreed at the First Conference on Nutrition in Malta as the basis for the Maltese food and nutrition policy (see below), to be supported by recommended daily intakes;
- the determination and regular updating of food goals and/or forecasts for the year 2000, to be worked out by an advisory body on nutrition;
- the preparation and review of measures dealing with food availability, quality and safety;
- the dissemination of dietary guidelines, based on the above recommendations, to the Maltese population; and
- the establishment of specific sectoral and intersectoral objectives and implementation strategies that will involve the formulation of intersectoral work plans giving short- and long-term goals.

Organizational structure

Functions

The objectives set out above could best be achieved by establishing two separate but liaising structures. The first would be an intersectoral advisory body on nutrition such as the NACFN, with the following terms of reference:

1. to advise the Government on all matters relating to its food and nutrition policy and to coordinate, monitor and evaluate the implementation of the policy;
2. to appoint, within the financial resources available to it for this purpose, consultants to give expert advice on any matters falling within its terms of reference when, in its opinion, such advice is necessary;
3. to appoint as appropriate standing committees, each chaired by a member of the NACFN, to perform specific parts of its functions under such conditions as it may impose;
4. to provide the scientific basis for the objectives of the food and nutrition policy;
5. to advise and liaise with research organizations on research needs associated with the food and nutrition policy;
6. to translate those measures recommended by the food and nutrition policy into a series of specific sectoral and intersectoral objectives and implementation strategies, within an appropriate time scale and priority ranking;
7. to ensure close collaboration and consistency of action regarding food and nutrition policy in the state and private sectors;
8. to update the food and nutrition policy in the light of changes in eating habits and in food production, processing, nutritional status or scientific knowledge in general;
9. to make proposals to the Government on any matters related to its functions; and
10. to report regularly to the authorities on progress achieved.

The second structure would be the Nutrition Unit, a section within the Division for Food and Water in the Department of Health. The Unit will aim at supporting the implementation of the food and nutrition policy in Malta. Suitably strengthened, it would have the following functions:

- to act as secretariat to the NACFN, in consultation with all relevant departments;
- to identify and propose solutions to nutritional problems of public health significance in Malta;
- to collect, analyse and interpret data relative to the effective implementation of the recommendations made on the food and nutrition policy;
- to provide advice in connection with nutrition-related research undertaken;
- to provide information aimed directly or indirectly at the public on food and health; and
- to report regularly to the Chief Government Medical Officer on progress achieved.

Composition

The NACFN has representation from sectors that are involved with or can contribute towards the realization of a nutrition policy in Malta. It will be reinforced with specific expertise as needed and/or will form working parties or subgroups to work on specific projects. The responsibilities of the members will relate to the terms of reference outlined above.

The officers of the NACFN will be senior officials with extensive knowledge of their departments and in a position to originate and recommend policy. When working on specific projects related to the food and nutrition policy, they will, as far as possible, be released from all other duties or will assign other officers from their departments whom they consider capable of assisting them. They will report to the Chief Government Medical Officer or his or her representative, as Chair of the NACFN, as well as to their heads of department.

The team working at the Nutrition Unit will initially consist of suitably qualified officers with expertise in nutrition, data management, planning and project management. The duties of this team will relate to the responsibilities listed above, and they will be assigned this work full time.

Policy evaluation

Information about the nutritional status of the Maltese population will be gathered through the establishment of a database covering the dietary patterns and the conversion of food data to nutrient data. This will allow for the planning of effective nutrition-related activities and for accountability.

National nutrient goals and dietary guidelines

Nutrient goals are precise statements of changes needed in the average diet of a community or population to bring about better health, and can therefore be used as objectives in a food and nutrition policy. The nutrient goals agreed during the First Conference on Nutrition in Malta are as follows:

| | |
|-------------------------------------|---|
| Total fats | 30% of total energy intake |
| Saturated fats | 10% of total energy intake |
| Polyunsaturated:saturated fat ratio | Not less than 0.5–1.0 |
| Cholesterol | < 100 mg per 4.18 MJ (1000 kcal) |
| Complex carbohydrates | > 45% of total energy intake |
| Sugars | < 10% of total energy intake |
| Dietary fibre | > 30 g per day |
| Salt | < 5–8 g per day |
| Proteins | 12–15% of total energy intake |
| Fluoride | 0.7–1.3 mg/l (in water supplies or the equivalent from other methods of fluoride intake, application, etc.) |
| Alcohol | Not more than 2 units per day |

Dietary guidelines are statements of changes in the national dietary pattern. These need to be made in order to reach the nutrient goals, and should be expressed in easily understood terms taking local eating habits and other dietary assessment data into account. In practical terms, the Conference participants recommended that the Maltese should consume less fat, salt and sugar and more fibre. To achieve these goals, it is advised that people eat lean meat and have fish and poultry in preference to beef; replace high-fat dairy products with low-fat alternatives; eat fewer eggs; and eat more fresh fruit and vegetables and whole grain products.

Nutrition policy measures and possible consequences

A food and nutrition policy will not change the amount of food provided, only the type. The following are a few examples of measures and possible consequences of the introduction of a food and nutrition policy in Malta. Proposal areas for implementing such a policy are given in Box 1. By nature, a food and nutrition policy is continually changing, and hence policy measures need periodic review in the light of changes in objectives.

Food availability

Food production

There is a need to provide consumers with an adequate and steady supply of locally produced foods that are in line with the food and nutrition policy. This may require local food producers to examine different technological processes, farming methods, marketing strategies, etc.

The sale of fresh fruit and vegetables is to be encouraged. If the demand increases it may be necessary to look at improving the marketing of these commodities. Advice on reducing the consumption of eggs may imply that the industry will need time to reduce production and organize itself for alternative production. The provision of skimmed milk and other low-fat dairy products will lead to the production of butterfat. This may mean that imported cream will be replaced by that produced locally.

Imported food

Trade measures are unavoidably a strong element in the food and nutrition policy. According to discussions with the Chamber of Commerce, there are no real conflicts between the nutrition policy and commercial interests, since the trade will import those commodities that the market demands. Licences issued by the Department of Trade for the importation of food products could serve as an important tool in enhancing the availability of foods that are more in line with the policy recommendations.

Catering

Catering is central to the implementation of the dietary guidelines. Chefs and cooks look positively at the challenge of providing foods that are more in line with the nutrition policy, in addition to existing foods, and will do so on an experimental basis. It has been demonstrated that healthier choices of foods in institutional catering are not necessarily more expensive.

School meals are served only in schools for the handicapped, and these need to be in line with the food and nutrition policy recommendations. Further, it is important to ensure that the assortment of foods in school tuck shops do not conflict with those recommendations. Meals served in hospitals and other residential health care institutions need to be similarly reviewed. This will provide an opportunity for consolidating nutrition messages.

Food quality and safety

The control of food safety and quality needs strengthening. Food legislation, if properly enforced, will safeguard consumers against

unethical operators and ensure fair trade practices. Expansion into international markets for locally produced foods, especially to EU countries, highlights the need for strengthening the whole food control infrastructure. Expert advice is being sought from FAO.

Awareness

There is a need to increase the awareness of the Maltese public about food and health. This will help to create a demand for foods that are in accordance with the food and nutrition policy recommendations.

Awareness must start from an early age, and the necessary education on nutrition must be provided to both boys and girls. Curriculum content needs periodic reviews to keep in line with the food and nutrition policy. Work is already under way to introduce suitable nutrition education into primary and secondary schools.

Another possibility is the setting up of a service within the marketing division of the Department of Agriculture and Fisheries. Local produce in season could be promoted, using messages in line with the food and nutrition policy.

Box 1. Proposed action areas for implementation

Activities in some of the following areas are already being undertaken. The order given does not indicate any order of priority.

Areas that deal with the availability and quality of foods

Crop irrigation
 Controls and specifications for imported food
 Grading system for agricultural produce
 Subsidies on distribution and production of locally produced food items
 Skimming of high-fat dairy products
 Regulation of livestock and poultry production
 Marketing of and information on desirable foods
 Regulation of flour extraction rate
 Revision of food standards and specifications
 Food safety and quality control
 Public sector catering

Areas that deal with awareness and knowledge

Source book on nutrition
 Emphasis on nutrition education in schools
 Teacher training in nutrition
 Licensing of tuck shops
 Nutrition programmes on radio and television
 Regulating hawkers in the school environs
 Training primary health care workers

Annex 3

Framework and options for action on food and nutrition policies in European countries⁶

Because food supply and tradition, culture and the economic situation vary so much from one country to another, food and nutrition policies will also vary. They will undoubtedly have many elements in common, however, and countries can benefit from each other's experiences. In some matters, joint action has already proved to be feasible and necessary.

This Annex may be helpful to all who are engaged in or influence policy formulation at national or local level as government advisers, members of consumer bodies, agriculturists, food manufacturers and retailers, caterers, researchers and health care professionals. It may also be useful to educators and people who provide information directly to the public through the mass media.

What is food and nutrition policy?

Food policy and nutrition policy can best be considered together, as they both concern the food supply. Food and nutrition policy as a whole may be defined as a concerted set of actions based on scientific principles, intended to ensure the safety and nutritional quality of the food supply and the accessibility of affordable and properly labelled food to all population groups, and that encourage and facilitate

⁶ This text is based on a background paper discussed at the First European Conference on Food and Nutrition Policy, Budapest, 1–5 October 1990, and modified according to the approach and strategies of the International Conference on Nutrition World Declaration and Plan of Action for Nutrition (*World Declaration on Nutrition. Plan of Action for Nutrition*. Geneva, World Health Organization, 1993 (document WHO/NUT/93.2)).

the healthy use of food. To succeed, such a policy must reflect a consensus among all concerned, give priority to consumer interests, and have government involvement and support. Reaching consensus should not, however, be allowed to obscure the primary need to serve the health interest of the population.

Although a food and nutrition policy will encompass a great many elements and involve many sectors of society, its extent will depend on the national situation. National policies will not be needed on issues that are not felt to be difficult and do not run counter to any other genuine interest. All countries have developed some elements of food and nutrition policy, and in recent years a number have formally introduced comprehensive, integrated food and nutrition policies of the type described here.

Why a food and nutrition policy?

Policies reflecting the need to ensure an adequate food supply are among the oldest and most fundamental in any community. As society develops, food supply becomes more complex and new elements of policy are necessary to deal with the conditions under which food is supplied, its pricing, quality and safety, and the effects of its production on the environment. With increasing affluence, new problems emerge that relate to the consequences of changes in the amount and type of food consumed. At present, the main causes of premature morbidity and mortality in European countries are diseases that are to varying degrees related to diet. Changes in dietary patterns and food composition therefore have a great potential to reduce the social and individual burden of ill health.

Although the prevention of these diseases is important in much of Europe, other elements in a food and nutrition policy are also essential. The most basic issue – access to sufficient food – continues to be a serious problem in many situations.

Well conceived food and nutrition policies can increase consumer awareness of the association between diet and health and widen the choice of safe foods of good quality. Such policies do not threaten the wellbeing of farmers or food manufacturers; they may even stimulate innovation and competitiveness, thus contributing to productivity in these sectors and growth in the national economy.

The development of food and nutrition policies is in line with the reorientation of health policies towards disease prevention, health promotion and the creation of a favourable environment in which individuals, supported by sufficient information, can assume a greater degree of responsibility for their own health. The establishment of

such policies is therefore an essential and integral part of the WHO strategy for health for all.⁷

Changing economic, social and political conditions in Europe create new opportunities and make this a particularly appropriate time for the reassessment, readjustment and development of new policy initiatives in this as in other fields of health and welfare.

Sectors involved in food and nutrition policies

According to the Plan of Action for Nutrition, improved nutrition:

requires the coordinated efforts of relevant government ministries, agencies and offices with mandates for agriculture, fisheries and livestock, food, health, water and public works, supplies, planning, finance, industry, education, information, social welfare and trade. It also requires the cooperation of universities and research institutions; food producers, processors and marketers; the health care community; educators at all levels; the media and NGOs involved in all of these sectors.

Policy design and implementation are primarily meant to serve the interests of individual consumers, but this cannot be done effectively unless all other interests are taken into account. The interests of the national economy, on which individual wellbeing in large measure depends, must be balanced against the food production, manufacturing and distribution sectors. These sectors have shown that they can go far to adapt to the genuine needs of society, provided that proper allowances are made and sufficient time is available. In the long term, these sectors are likely to find that it is in their own economic interest to adapt to the needs of healthy living.

Other actors involved include those concerned with government and local programmes, the mass media, education, nutrition science and other health professions, and voluntary organizations.

Initiating a food and nutrition policy

Setting up an organizing structure

Both the policy-making and the administrative functions must be structured to handle the multisectoral nature of food and nutrition. In some countries, these two functions have been entrusted to different bodies.

⁷ *Health for all targets: the health policy for Europe*. Copenhagen, WHO Regional Office for Europe, 1993 (European Health for All Series, No. 4).

An advisory body will be needed at the earliest stage to prepare the ground for policy development. Some such bodies have in the past come into being as a result of voluntary initiatives. They are most effective when they represent all the sectors concerned, including consumer interests. Any government representation should be broad, covering at least the fields of health, education, finance, agriculture and industry. Based on an assessment and analysis of the situation, the advisory body should define the national need for a policy and advise on its content and the strategies to be adopted. Once the principle of instituting an integrated food and nutrition policy has been officially accepted, this multisectoral body can play a permanent role in monitoring its implementation and, when necessary, its adaptation to changing conditions such as new scientific knowledge, new technologies or economic development.

How administrative and executive functions are handled will depend on national structures, but the multisectoral nature of the task will demand close links between those parts of the administration dealing with health, finance, agriculture, industry, consumer affairs and education.

Developing a national policy

The Plan of Action for Nutrition recommends that governments, in close cooperation with all parties concerned, identify the priority nutritional problems in their countries, analyse their causes, plan and implement appropriate remedial actions and monitor and evaluate efforts to improve the situation. Governments should also analyse the effects of macro-level policies and sectoral or integrated development plans on nutritional wellbeing, especially of the most vulnerable groups in the population.

In assessing the feasibility of a comprehensive food and nutrition policy, and developing its scope and content, it is necessary:

- to examine basic population and lifestyle data, including national or international information on the relationship between diet and health (the basic justification for the policy), relevant demographic trends and the needs of special groups (infants, elderly people, disadvantaged people, etc.);
- to assess constraints and opportunities posed by the political climate and the general situation in the country;
- to assess the status and performance of relevant services, including the degree of equity in the health and nutrition status of the population, service delivery systems (health care, education and training, social services, consumer services, etc.), the food production and processing system, and the food distribution and marketing patterns, including mass catering;

- to seek to predict the sustainability of the food supply, taking environmental considerations into account;
- to catalogue related regulatory and control measures already in force, such as those on food safety, quality, labelling and pricing, ecological concerns and environmental health;
- to identify national and international links in the relevant research fields, and define and deal with gaps in knowledge; and
- to study the available educational, information and communication networks.

Formulating the policy statement

A proposal or decision to institute a comprehensive food and nutrition policy can usefully be built around a concise policy statement setting out broad policy goals and strategies, with an explanation of why these are regarded as feasible. This statement can be supplemented by an overview of diet–health relationships, the political landscape, the economic, social and commercial situation, and the needs of special groups. To reach a wide audience, the statement should be clear and comprehensible.

Developing the policy

Once it has been decided to institute a comprehensive food and nutrition policy, concrete, measurable objectives need to be set. Policy-makers will have to determine the scope of the policy, and set priorities in light of the costs and benefits and existing constraints. Continuous monitoring of the process of policy implementation should be planned at this stage, with enough resources to capture the necessary information. This is a time when a blend of realism and bold vision is called for.

Defining goals and objectives

General goals pertain to health, food supplies and other social concerns (such as improvements in dietary habits and food production, equal access to food, or dealing with international or national food aid).

Objectives relate to specific issues and can commonly be quantified and measured (such as specific nutrient recommendations for the population or for subgroups, or specific diet-related health objectives).

Analysing costs, benefits and other consequences

The consequences of instituting comprehensive policies and of attaining particular objectives will need to be assessed in advance and reviewed regularly. Using appropriate indicators, it would be possible to follow the effects on selected health variables (such as cardiovascular morbidity and mortality) and on patterns of food consumption and nutrient intake.

It is equally important to foresee and monitor the effects of the policy in areas such as food production, manufacture, distribution and marketing, and the impact on disadvantaged groups and communities.

Where possible, these analyses may be used as the basis for calculating the cost–benefit ratio of policy implementation.

Determining the scope of policies

In their broadest form, food and nutrition policies will bear on all the sectors that influence people's choices in matters of food and health, such as the educational system; the machinery of public information; research institutions; health and social services; official bodies concerned with such matters as food quality and safety; labelling; mass catering; environmental questions and consumer affairs; and the food production, processing and distribution system. The policies will also be important for organizations working in areas related to nutrition policy, such as nutrition societies and other professional organizations (especially those in the health field), consumer associations, voluntary bodies in the field of disease prevention (such as heart and cancer associations), health insurance and social security institutions, trade unions and sports associations.

Choosing policy measures

Policy measures are designed to influence one or more of the factors that determine dietary habits, such as consumer knowledge, information, motivation, availability and local access to food, culture, prices and regulations, and food quality and safety.

Every country already employs policy measures relevant to food and nutrition. These should be assessed regularly to determine which of them should be maintained in their existing form, which require adaptation and improvement to serve policy objectives better, and which need to be modified or abandoned because they run counter to current objectives or are mutually contradictory. Food quality control, for example, will need to be reoriented as the nature of

problems changes, and labelling requirements should be amended and updated to take account of new knowledge.

A wide range of policy measures is available. No measure is likely to be effective in isolation; one may reinforce another. The following are some examples of measures that have proved fruitful under certain conditions.

Public education and an adequate flow of information, designed to provide individual consumers and institutions with the knowledge and skills needed to make informed food choices, can be aimed at the entire population or directly at specific groups. The means of providing the information effectively, for example, in the form of dietary guidelines, need to be studied and tested.

Health professionals, educators and food workers can be trained in nutrition, encouraging all disciplines to work together to promote healthy nutrition. A clear strategy is required for the training of full-time professionals in the nutrition sciences, either as a postgraduate specialization or as a basic course of training in its own right. Nutritionists and other health professionals should be made aware of the food and nutrition policy and its specific issues of relevance to them.

Regulatory measures can be used to promote nutritional objectives in the areas of food production, marketing and distribution. Such measures would comprise new or adapted laws, norms and guidelines, complemented where possible by voluntary agreements with the market sector and by industrial self-regulation. A combination of regulation and voluntary agreement may prove effective in the marketing and presentation of foods (ingredient and nutrition labelling, health claims and advertising), food fortification, food quality standards, food safety, the handling and preparation of food for mass catering and communication of information to the media.

Economic measures may ensure the availability of good food at affordable prices and guide food production and consumption in a healthy direction. They include food subsidies at consumption and production levels, pricing policies and taxes, and appropriate import and export policies.

Research may be needed where some of the information required for policy implementation may not be readily available within the country; this should not delay the institution of a policy. It will probably be necessary to promote and fund research to provide a continuous input of relevant data, while existing data (such as those on dietary patterns, food production, and trends in mortality and morbidity) can be derived from different sources and will require

verification and interpretation to be usable. International comparisons are likely to prove useful.

The delivery of nutrition-related services such as counselling through the health care system, training and information through the educational system, and public catering naturally forms part of an integrated food and nutrition policy.

Ensuring intersectoral consultation

The plan of Action for Nutrition recognizes the importance of intersectoral consultation:

national intersectoral coordination mechanisms are needed to ensure the concerted implementation, monitoring and evaluation of policies, plans and programmes. Community involvement is imperative in all aspects of planning and execution of nutrition improvement activities.

All sectors concerned must be consulted openly, so that as the measures are employed, the principles underlying the policy and the choice of measures are made clear and acceptable. Comments should be invited and the help of all sectors mobilized wherever possible.

Monitoring and evaluating the policy

According to the Plan of Action for Nutrition, governments, in close cooperation with all concerned parties, should:

Establish or strengthen data collection, analysis and reporting systems within appropriate institutional frameworks in a sustainable fashion in order to meet the relevant priority information needs of planners, policy-makers, programme managers and communities as they address nutritional problems.

Information will be used throughout the policy-making process to review the state of knowledge and assess the health scene, to formulate and revise goals, objectives and priorities, to assess changes in the general situation (as regards economic constraints, for example), to inform the public and to monitor the effects of policies. The more complete the information available, the easier it will be to identify the need for particular policies and to see how they should be formulated to serve the public interest.

A systematic information retrieval scheme will greatly facilitate policy implementation and adjustment and allow for surveys and investigations into unexpected effects of the policy.

Organizing implementation structures

The Plan of Action for Nutrition calls for action to implement nutrition policies:

All governments should establish appropriate national mechanisms to prioritize, develop, implement and monitor policies and plans to improve nutrition within designated time frames, based on both national and local needs, and provide appropriate funds for their functioning. ... Governments at the local and provincial levels, as well as NGOs and the private sector, should be encouraged to participate in the process.

Experience shows that there are different ways of implementing comprehensive food and nutrition policies. Clear organizational structures are fundamental to effective planning, implementation and evaluation.

The organizational structure will be responsible for implementing and evaluating the policy through existing or newly created bodies, building up social and political support for it, minimizing economic risk through consultation and advice, and supporting its organizational development. Such a structure in itself, however, is no guarantee of action.

The organizational structure should:

- take account of the development of the social and political environment;
- define and revise specific objectives (with time frames where needed), priorities for action, responsibilities, resources and reporting requirements;
- coordinate implementation where this is feasible and helpful;
- monitor and evaluate implementation and progress towards the attainment of goals and objectives; and
- ensure accountability.

The organizational structure in turn requires: adequate staffing, financing and authority; access to expertise, information and decision-makers; and the skills and incentives needed to involve and motivate sectors and groups whose interests are affected by the policies and whose cooperation is necessary to reach policy goals. All sectors should participate, according to the Plan of Action for Nutrition:

All sectors of society should be encouraged to play an active role and to assume their responsibilities in implementing related components of the national plan of action, with appropriate mechanisms for coordination. Households, communities, NGOs, private institutions – including industry, small-scale producers, women farmers and trade and services, as well as social and cultural associations – and the mass media should be mobilized to help individuals and population groups achieve nutritional well-being in close association with government and technical service sectors.

In summary, the human, economic and environmental costs of diet-related ill health point to the need for comprehensive food and nutrition policies with a major emphasis on health. Many countries have already made important progress in developing and implementing such policies. Their experience, and current knowledge about the links between diet and health, suggest that people everywhere can benefit from further development of food and nutrition policies.

Annex 4

Nutrition policies or plans of action in Europe

In December 1992, FAO and WHO jointly organized the International Conference on Nutrition in Rome. On 10 May 1993, the World Health Assembly adopted resolution WHA46.7 on follow-up action to the Conference, wherein Member States requested the Director-General of WHO, *inter alia*: “to report on progress in implementation by Member States of the World Declaration and Plan of Action for Nutrition to the Health Assembly in 1995 as stated in the Plan of Action”.⁸

In June 1994, therefore, the WHO European Member States received a questionnaire from the Nutrition unit at the Regional Office, requesting information on some of these issues. The very good response received formed the basis of this brief analysis.

Who has a nutrition policy document?

The Plan of Action for Nutrition, regarding follow-up to the Conference, urges governments: “To prepare or improve, as early as possible and not later than the end of 1994, national plans of action and policies based on the principles and strategies enunciated in this World Declaration and Plan of Action”.⁹

Experience has shown that action is more likely to follow an explicit political mandate. Without it, activities may often be disparate,

⁸ WHA46.7. International Conference on Nutrition: follow-up action: *In: Forty-sixth World Health Assembly: resolutions and decisions*. Geneva, World Health Organization, 1993, pp. 4–6 (document WHA46/1993/REC/1).

⁹ *World Declaration on Nutrition. Plan of Action for Nutrition*. Geneva, World Health Organization, 1993 (document WHO/NUT/93.2).

short-lived and, at times, contradictory. In the questionnaire, Member States were asked whether they had a written policy document, explicitly concerned with nutrition and adopted by a political body. This could be either a separate document or part of a general policy. They were further asked to provide the date of adoption and name of the body adopting it.

Of the 33 Member States that replied, 24 stated that they had such a policy document; another 5 stated that they would adopt one by the end of 1994. The political body adopting the policy was the parliament, government or cabinet of ministers in 13 cases. In 11 other cases it was the ministry responsible for health.

Policy implementation structure

To get an impression of policy implementation as outlined in the World Declaration and Plan of Action, an item on the questionnaire asked whether a special administrative structure had been set up for this purpose. Twenty-one countries had set up such a structure, and some had administrative bodies specifically for the purpose. Others had allocated the task of policy implementation to existing bodies that had other responsibilities as well.

Nutrition advisory body

Experience shows that a national advisory body or nutrition council is crucial for continuity and institutional memory in policy implementation. The establishment of such bodies may, in the first place, ensure that an existing national policy is carried out. Members may act either as advisers when called on by government, or independently, having a watchdog function. Membership is sometimes linked to nutrition scientists, whose tasks may be of an academic nature. In other cases, the members represent the many different stakeholders in nutrition policy, such as scientists, the mass media, industry, trade and agriculture. Of the existing nutrition councils, 18 have specifically formulated mandates or terms of reference.

Of the 33 countries that responded, 23 had such advisory bodies, a little under half of which had been established in the 1990s. The membership varied between 5 and 40.

Nutrient reference values or recommended dietary allowances

Nutrient reference values or recommended dietary allowances are tools for nutrition policy implementation, and all but two countries

appear to have or are in the process of obtaining them. In several cases, however, they are quite old, and sometimes appear to have been copied from other countries. Since nutrition science has developed rapidly in the last few years, some countries probably need to update their nutrient reference values.

Nutrient reference values are the basis for dietary guidelines for the public. The Plan of Action makes ample reference to the importance of nutrition education of the public. Twenty-five countries have dietary guidelines for nutrition education; in ten they date from the 1980s, and very likely need updating.

National data on dietary patterns

Some basic data on what people actually eat are necessary for making nutrition policy. They are also useful for agriculture policy, food industry policy and food safety regulations and their implementation. Here, the European Member States appear not to be so advanced. Thirteen countries have undertaken either no studies of nationally representative samples or only small studies on subgroups of the population. Fewer than half of the responding Member States appear to have recent data available: only twelve of the reference studies cited are from the 1990s. Again, data from the 1980s will probably need to be updated. Only one country refers to annual data collection on population dietary patterns, and one other country collects data at regular five-year intervals. Table 1 summarizes the responses received.

Responsibility for action and interaction

The Plan of Action calls for the development of intersectoral mechanisms of coordination and collaboration. Responsibility for action in some of the most central policy areas differs markedly between Member States, perhaps indicating that countries are still at an experimental stage with regard to this part of their administration. The intersectoral nature of nutrition policy-making calls for new thinking and priority setting.

Policy content

Table 2 gives an overview of the content of policies relative to the eight main themes of the World Declaration and Plan of Action.

This gives an interesting insight into the nutritional concerns of Member States. The three themes most often mentioned are assessing the nutrition situation, appropriate diets and lifestyles, and food quality and safety. Further, 18 countries have policies aiming at incorporating nutritional objectives into the policies of other sectors, and that as many as 15 of the policies or plans of action on nutrition include the promotion of breastfeeding.

This publication describes the experiences of those Member States of the WHO European Region that were among the first to develop food and nutrition policies as part of the regional strategy for health for all. It presents a vast array of experience, insights and points of view on current issues in nutrition policy-making across Europe. These problems, activities and hopes are among the most important that will occupy decision-makers and the public alike as they take part in the process of defining the new Europe of the next century.

The book addresses a wide audience: policy-makers and leaders in industry, agriculture, health, education, the environment, consumer affairs and the media, and indeed anyone who may be interested. Its purpose is to acquaint readers with the experiences and lessons to be learned from other countries, and to encourage thoughtful discussion about what the rapidly changing context of Europe means for the nutrition and health of all Europeans, whose wellbeing is now more than ever interdependent.

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