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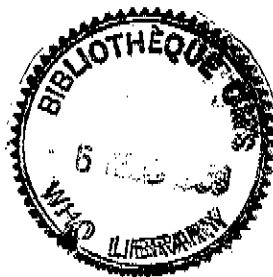
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TARGET 16

Promoting positive health behaviour

By 1995, in all Member States, there should be significant increases in positive health behaviour, such as balanced nutrition, nonsmoking, appropriate physical activity and good stress management.

Index:

NUTRITION
HEALTH POLICY
DENMARK
FINLAND
FRANCE
HUNGARY
NETHERLANDS
NORWAY
POLAND
SWEDEN
UNITED KINGDOM
UNITED STATES

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1. Background

1.1 Introduction

Nutrition policy is not a new concept. Historically, in situations of food shortage, various coordinated sets of action have been taken, often on government initiative, to assure the nutritional quality and safety of the food supply to the population. The intention of these actions may also - at least in later years - explicitly be to promote health and improve dietary habits.

Many terms have been used to designate nutrition policy through the years: *nutrition planning, multisectoral nutrition planning, nutrition strategy, food and nutrition strategy, food and nutrition policy, food supply and nutrition policy, food health policy and food health strategy*. All these terms, however, refer to the same kind of analysis and action.

Nutrition policy-making enjoyed an increased popularity in the early 1970s. Such policies were mainly regarded as appropriate for developing countries, and their objective was usually to alleviate hunger and malnutrition. For various reasons, however, they did not prove a particularly potent weapon against those menaces. One of the reasons was of course that the causes of hunger and malnutrition are basically linked with societal inequities - which are not easily addressed by nutritional analysis alone.

Nutrition policy-making in the 1970s was probably also afflicted to some extent by "analysis paralysis", as it was termed at the workshop. Food, nutrition and health, being matters that concern a variety of sectors, are fertile fields for analysis. Consequently, the process of turning nutrition planning into political action was often impeded by a desire on the part of many of its proponents to be systematic rather than opportunistic. This satisfied analysts but failed to excite decision-makers. So towards the end of the 1970s nutrition policy-making was no longer in vogue in all but a few countries around the world.

The result of the intellectual efforts in those years was mainly that the relationship between diet and health was politicized and operationalized, at least in theory.

In the 1980s a number of countries, as in Europe, have found themselves in the historically unequalled situation of overall agricultural abundance, with more than enough food produced to meet the needs of all. In these countries there is now a revival of interest in nutrition policy-making. The fact that this abundance is accompanied by increased mortality from chronic, degenerative diseases provides policy-making with a health rationale. The challenge is to plan agricultural production and food processing in a way that takes both economy and health into consideration. Food producers and processors are the ultimate victims of a malproduction of food that may occur if they do not heed the physiological limitations of the human body. They are the ones who suffer low prices or stocks of unsaleable foods. They therefore often welcome policies that provide a framework to help them to plan their production and processing in a rational way.

The association between diet and health makes it necessary for the health and agriculture sectors to work together in the planning of a food supply that favours good health. With the help of manufacturing industry, the products of agriculture can be turned into enjoyable and healthy foods. In the long run,

this is the only way to get out of the present unhealthy situation in Europe, where stocks of malproduced food pile up and where many people are unaware that you may get sick if you eat everyday the kind of food that was formerly intended for festive occasions only.

1.2 Scope and purpose of the meeting

The renewed interest in nutrition policy-making has led the Nutrition unit in the Regional Office for Europe to concentrate its activities on the description and analysis of nutrition policies in the European Region.

The present Consultation, which was financed by the Ministry of Welfare, Health and Cultural Affairs of the Netherlands, aimed at providing a forum for the exchange of experiences in the implementation or analysis of nutrition policies in different national settings. It was attended by experts from nine European Member States - Denmark, Finland, France, Hungary, Netherlands, Norway, Poland, Sweden and the United Kingdom - from the Commission of the European Communities and from the United States (see Annex 1 for list of participants).

1.3 Agenda

As a framework for the discussions, the meeting used three "action elements", which together comprise a comprehensive nutrition policy, namely:

(1) Prerequisites for making nutrition policy:

- setting objectives for the policy so as to establish what the population should consume, within a given time-frame, in terms of nutrients and of types of food;
- collection of information about what the population actually eats and what trends may be identified in food consumption, as well as information on conditions that influence food consumption; study of vulnerable subgroups that may need special attention; investigation of nutrition-related health status parameters.

(2) Activities within a nutrition policy:

- identification of areas for government action with regard to availability and quality of food to the consumer and extension of knowledge to the consumer about the impact of nutrition and food on health.

(3) Organizational structure for a nutrition policy:

- allocation of responsibilities with regard to advice and guidance concerning diet, as well as problem identification and decision-making.

In practice, food and nutrition policy-makers will have to act in all these areas simultaneously. Setting objectives and describing the present situation are, however, prerequisites for getting organized and taking action.

Actions cannot be given in order of priority, since local conditions and prevailing public/political interest will ultimately decide the priorities. This was described by one of the participants as "acting opportunistically".

Obviously, food and nutrition policy is a good example of a public policy that has the potential of promoting the health of a population. This type of policy is described in target 13 in the European regional strategy for health for all by the year 2000, which reads: "By 1990, all Member States should ensure that legislative, administrative and economic mechanisms provide broad intersectoral support and resources for the promotion of healthy lifestyles and ensure effective participation of the people at all levels of such policy-making". The workshop was conducted with this target in mind.

1.4 Nutrition policies in northern Europe

The situation in the northern European countries presents a varied picture with regard to nutrition policies. Three countries - Denmark, Netherlands and Norway - have nutrition policies that have been adopted by parliamentary decision and implemented in different ways for a number of years. Some countries, e.g. Sweden, have had a nutrition strategy since the early 1970s, but have taken no political decision to make it mandatory. Some countries have adopted health policies that require the urgent formulation of a nutrition policy, such as Finland, or a health promotion policy that does the same, such as Hungary. Some countries have a nutrition strategy that is just about to be put into effect, such as Poland, and some have no policy formulated at central level but intense activity in the regions, such as the United Kingdom.

The variability of the above picture indicates that it will hardly be possible to devise a model policy that will suit many countries, since diet is such a local phenomenon, influenced by many factors depending on local political situations, traditions and economies.

Common to all countries present at the Consultation was the realization that political action with regard to food and nutrition is justified, although the means for taking this action may vary. The justification on health grounds is generally regarded to be most solid with regard to cardiovascular diseases. There is a scientific consensus that an overconsumption of fat, particularly saturated fat, mainly from animal sources such as meat and milk, has a negative effect on the serum cholesterol level of most people and thus puts them at greater risk of an untimely death from cardiovascular diseases. This increased risk applies to both overweight and thin people.

1.5 Collaboration with food producers and manufacturers

In all the countries where a nutrition policy or strategy has been put into operation, at either central or local level, it was reported that agricultural producers and food manufacturers, dependent as they are on the market and its whims, are usually positive collaborators in nutrition policy-making. In the short term, there may seem to be a conflict of interest between health gains and economic gains, but in the long term, it was stated, these interests will usually coincide or workable compromises can be found.

1.6 Consumer interest

In all countries today, consumers are positively interested in nutrition. They often complain, however, about the inconsistency of expert nutrition advice. In actual fact, there has been a demonstrable consistency in dietary guidelines over the past 30 years. One problem is certainly that all those wishing to advance their ideas on eating can - and, it seems, will - call themselves a nutritionist, since this is not a protected title. In spite

of this problem, consumer interest has resulted in a variety of local nutrition-related actions being taken, such as the project Heartbeat Wales and the recent spontaneous formation of associations for better food and nutrition in Poland.

2. Overview of nutrition policy-making in Europe and the United States

2.1 Denmark

In 1984 the opposition party introduced a proposal for a parliamentary resolution on the implementation of a nutrition policy in Denmark, which was subsequently adopted. It is a brief document, mainly outlining five policy action areas. No formal structure or organizational framework for its implementation was foreseen, although the National Food Agency (then under the Ministry of the Environment) eventually became the main body responsible for the practical action.

Denmark has not to date appointed any official nutrition advisory board. In 1988 the Research Institute for Human Nutrition was established at the Agricultural University in Copenhagen.

In 1987, the National Food Agency was transferred to the new Ministry of Health, and the nutrition policy has been described as having run out of steam, in that after some action had been taken in each of the five areas, politicians may have felt that their obligations had been fulfilled.

2.2 Finland

There was certainly concern in Finland about the relationship between heart disease and diet following the country's participation in the Seven Country Study of Keys et al. in the 1950s. Cardiovascular diseases then declined in the 1960s and 1970s from their previous high levels, but the decline is now levelling off.

A Finnish health policy report to the Parliament in 1985 charged the interministerial National Food Advisory Board with the task of developing both national dietary recommendations and a comprehensive programme for food policy by 1990. This work is now well under way, in consultation with the food producing and food manufacturing sectors. In this process, the producers have proved more flexible and accommodating than the manufacturers.

2.3 France

There is no official nutrition policy in France, but rather a series of ad hoc actions. Several committees and organizations work in the field of food and nutrition, the most important being the National Food Council, which is an interministerial body with an overall advisory function, but there is no central coordination of their activities. The Higher Council for Public Health is in charge of regulatory questions in relation to food.

The National Committee for Health Education undertook a well organized nutrition education campaign some years ago, but it now lacks funds.

French consumers seem to be concerned mainly with the quality of food and rather less preoccupied about the relationship between food and health. Food is not subsidized.

2.4 Hungary

Having experienced an unprecedented increase in cardiovascular diseases, Hungary is now attempting to reverse this trend. A national health promotion policy is being developed, in which nutrition is seen as an important factor to be influenced. An intersectoral report on the situation, covering health, agriculture and the food industry, has been commissioned.

No food-health strategy as such has yet been adopted. Recommended dietary allowances have been published, and a large population-based survey to investigate dietary patterns was undertaken in 1986.

2.5 Netherlands

Here, too, consumer interest in the subject is pronounced. In 1981 the Netherlands Parliament requested the Nutrition Council to issue guidelines for a healthy diet.

A comprehensive nutrition report was subsequently issued and adopted as a policy by the Parliament in 1984. It concentrated on health and nutritional aspects of food and on food safety, the latter being seen as a special consumer concern. In 1987 nutrient goals were established and a national food plan was adopted. The plan provides for a food consumption survey, a central data base on food composition and a first programme for the reduction of fat intake, especially with regard to saturated fat.

It was also decided to issue a progress report every three years, the first being published in September 1987.

2.6 Norway

The approval of the food supply and nutrition policy by the Norwegian Parliament in 1975 was preceded by the publication of dietary guidelines for the prevention of cardiovascular diseases as early as 1963. Already at that date a diet-health relationship was implied, thus preparing the ground for later policy action.

A policy report adopted by the Parliament in 1975 was initiated by the Ministry of Agriculture, whereas follow-up reports in 1982 and in 1988 were handled by the Ministry of Social Welfare. Since Norwegian agriculture is dependent on large transfers of taxpayers' money, the Government can clearly not afford to be seen as uninterested in the effects of the food produced on the taxpayers' health. The food-health link can instead be used as a rationale for continued national food production, and the policy in its statement of objectives emphasizes the importance of national food security and increased self-sufficiency.

There is a huge difference, however, between the NKr 55 million budget of the nutrition sector and the NKr 10 000 million allocated for agricultural support.

2.7 Poland

Food has for many years been a contentious issue in Poland, and food prices are a highly political issue. Cardiovascular diseases, which for the last decades have been on the increase in the country, went through a transient phase of decrease, coinciding with a shortage of food, cigarettes

and alcohol in the late 1970s. By mid-1980, with supplies back to normal, the heart disease mortality trend was again rising.

The Polish Government has expressed a strong interest in a nutrition policy, but would like to place the main emphasis on a broad nutrition education campaign. There is, however, a growing awareness that this will have to be coupled with other nutrition policy measures in hand.

Objectives for the nutrition policy have been prepared, at least at a nutrient level; and, as a nutrition information system could easily be made operational, the policy might soon be under way.

There is no lack of consumer interest in the issue. Popular associations have been formed, with the explicit goal of promoting healthy nutrition and healthy lifestyles. Fairs showing healthy food have been organized, combined with scientific symposia and social meetings. In general, there is much activity at all levels in Poland with respect to food and nutrition.

2.8 Sweden

Here, as in Norway, a far-sighted medical advisory board in the early 1960s recommended dietary moderation as a tool in the fight against noncommunicable diseases. From then onwards, there was active collaboration between nutrition scientists and the food industry. In 1971 this resulted in a broadly based diet and exercise campaign, which was undertaken for ten successive years.

The interministerial Advisory Board for Food and Nutrition was established in 1978, and is still in operation.

In 1983 a "Food committee of 1983" was appointed, consisting of eight subcommittees. One of these, an expert group for diet and health, drew up a report containing a comprehensive and well founded food and health strategy for Sweden. Although it was never adopted as mandatory policy, it has been the basis of much of the action that has taken place in recent years. In 1987 the Swedish National Food Administration and the Ministry of Social Affairs appointed an expert committee to act in an advisory capacity to both government and industry generally on questions of nutrition. The National Food Administration also adopted its own programme of action in the area of diet and health.

2.9 United Kingdom

The United Kingdom has an advanced system in place for generating nutrition information in the annual household surveys published by the Ministry of Agriculture, Fisheries and Food.

On the health side, two reports were published in the 1980s, addressing the question of diet and health. The first was a report by the National Advisory Committee for Nutrition Education, published in 1982 by the National Education Council. The second dealt specifically with the prevention of cardiovascular diseases and was published by the Committee on Medical Advice. Both reports received much publicity and may have raised public awareness.

Although there is no national nutrition policy in the United Kingdom, numerous regional food-health policies have been formulated, very often on the initiative of local health authorities. These usually consist of practical

programmes, often geared to the prevention of heart diseases - such as Heartbeat Wales, which was represented at the Consultation.

The food industry is generally very active and interested in the subject of food-health policy. The catering industry has also tried in various ways to accommodate consumer interest, and the agricultural sector has a positive attitude to anything that can avert public aggression towards their profession.

2.10 United States

The situation in the United States naturally differs from that of Europe. In principle, the market is wide open, although very detailed food regulations exist. A normal supermarket will have up to 18 000 different food items available, and 1000 new ones are introduced every month.

There are various ways in which regulatory and protective action is taken, much of it in principle emanating from Congress through directives in appropriation laws, and formulated in dialogue with the Department of Health and Human Services. This Department, in its turn, has considerable means at its disposal to stimulate and direct scientific research, to ask for expert advice in creating regulations on food quality and also, to some extent, to campaign. The dietary goals of 1977 and dietary guidelines of 1980 and 1985 are the result of this kind of activity.

Consumers in the United States are hungry for information about health and diet - and get a lot of it.

3. The need for a nutrition information system

3.1 What people eat and how it influences their health

3.1.1 Use of information

There are several sources of information about diet, some providing population-based data, and some group-level or individual-level data. It is important first to define the purpose for which data are needed before selecting the appropriate data source. When using and interpreting data, care must be taken to establish precisely how they were collected and what they actually tell us.

For advocacy purposes *vis-à-vis* politicians and the public, trends and international comparisons may be useful. They may demonstrate how population eating patterns are developing over time and how they compare with those in other nations. Group comparisons may also be useful, to highlight differences between groups and motivate people to use the different tools and measures at hand.

For planning purposes at a national level, population-based figures will give the overall picture, but individually based data are needed to identify risk groups and plan local action.

For the monitoring and evaluation of policy action taken, all available national sources of data may be used, depending on what aspect is being surveyed.

3.1.2 Sources of information

Information is available from several sources.

First, the Food and Agriculture Organization of the United Nations continually collects food production data and presents them as food balance sheets in a standardized fashion that allows international comparison but reduces accuracy. The use of these data is limited to international comparisons of levels and trends of food consumption, mainly for advocacy purposes.

Second, national food balance sheets give more accurate data for national planning purposes and are especially important for monitoring the effects of nutrition policy action and seeing if objectives are being met.

Third, household budget surveys are undertaken at differing intervals in most European countries. They are done for the purpose of economic policy formulation and the establishment of consumer price indexes. They provide information about different population categories: urban/rural, socioeconomic, etc. They may therefore be an indispensable source of knowledge about group differences for the nutrition planner.

All the above data sets have the advantage of being collected regularly for purposes other than nutrition policy-making. They are therefore available, at no extra cost, to nutrition policy planners. Their use in nutrition policy planning will of course still demand resources.

Fourth, individually based surveys are now undertaken in many countries, sometimes using a nationally representative sample. This was the case in the mid-1980s in Denmark, France, Hungary, Netherlands and the United States. Depending on the methodology and the amount of information collected, the price of its collection varies. The price per interview in the above surveys varied from approximately US \$70 in the United States to US \$150 in Denmark and the Netherlands.

Fifth, in Finland, a rather less expensive method has been used, consisting of an annual mail questionnaire sent to 50 000 people and asking about the frequency of consumption of various types of food. It has been used for ten years now and yields valuable information about consumption trends.

These data, too, have uses beyond governmental nutrition policy-making: they may be useful for the food industry, health and agriculture planners and economic policy-makers.

3.1.3 Other data

Auxiliary data should of course also be regularly collected for use in nutrition policy-making on such subjects as:

- nutrition status;
- mortality (and morbidity) from nutrition-related diseases;
- agricultural policies, including fisheries;
- food prices, subsidies and taxes;

- prices and availability of food processing equipment, e.g. microwave ovens and freezers;
- mass catering;
- the educational system in relation to nutrition;
- customs tariffs;
- food legislation;
- the overall political situation, which plays a key role, for instance, in shaping the programme of the party in power.

3.2 Data on food behaviour

It is becoming increasingly clear that dietary data alone do not provide all necessary information for effective nutrition policy action to be taken. Studies of people's knowledge, attitudes and beliefs will also have to be part of the information base for nutrition policy in future.

In the United States, a health and diet study has been conducted biennially since 1982 to track public knowledge, attitudes and beliefs about food and health. In France, a survey of consumer perceptions of food was carried out in 1985.

Observations from the surveys, which were discussed in the Consultation, include the following.

Differences in nutritional behaviour are related to the social situation - which is usually expressed in terms of educational level.

It is remarkable that nutrition education programmes somehow seem to be of greatest benefit to people with the same educational level as those who design them.

Dietary behaviour is dynamic: nutritional change takes place not only through acquisition of knowledge but also through behavioural modelling and imitation. It may therefore not necessarily be a good idea to concentrate all educational resources on the weakest social groups; there is a need for good leadership and good role modelling as well.

Practical skills, such as cooking technique and the ability to make good food, are quite as important as theoretical knowledge in nutrition.

It is very difficult to design questionnaires on dietary behaviour without appearing tendentious and without soliciting the obvious answers.

One way of monitoring the truthfulness of responses is to compare them with purchase data from the same responders.

In the Danish nutrition survey of 1985, it was found that the social indicators that had been used (which had to be the same as those used by other national surveys) did not distinguish properly between different food consumer groups. Dietary differences in Denmark do not seem to coincide with social indicators: the risk groups are distributed over all social classes. In Denmark today, education and income are not commensurable. An indicator such

as length of education covers many different types of education and gives no useful indication of food habits.

3.3 Secular changes in dietary habits: the example of the United States

Along with reduced cardiovascular disease mortality rates, there have for many years been considerable changes in food consumption in the United States. The population is very health conscious. This is demonstrated, for example, by the circulation of a magazine entitled *Prevention*, which propagates among other things so-called health foods. It sells ten million copies per month.

The situation in the United States is particularly well described. Some of the hard data concerning recent dietary changes in the United States are provided by two surveys carried out at an 8-year interval by the US Department of Agriculture: the "Continuing surveys of food intakes by individuals" in 1985-1986, and the "Nationwide food consumption survey" in 1977-1978. The studies used a nationally representative sample of women in the age group 19-50 years.

In the course of these eight years, United States women had increased their intake of skim or low-fat milk by 60%, and decreased their meat consumption by 34%. Only 12% of the women in 1985 had an intake of fat below 30% of total energy intake, as is recommended by WHO among others. Some 33% of the women, however, had an intake of below 35%. Only 10% got "less than 10% of their energy from saturated fat", which is another common recommendation.

In addition to micro-nutrients from food, which were generally found to be adequate, 58% of the women in 1985 took supplements of vitamins or minerals. There is evidence that those who use supplements are usually those with the more satisfactory diets.

"Snacking", i.e. eating snacks between main meals, increased in the study period. In 1977 about 60% of the women and children reported snacking on the day the survey took place. In 1985 about 80% did so. Snacks furnished 19% of the total daily energy intake of the children in the study.

The number of meals eaten away from home is another rapidly changing aspect of eating. In the period 1977-1985 the number of women eating out increased from 45% to 57%. The same trend was seen in children, with an increase from 30% to 43% over the period. In 1985 women actually got 28% of their total energy intake from food eaten outside the home.

Generally, it does seem as though the US dietary guidelines of 1977, 1980 and 1985 are having some influence in that lower fat foods are gaining considerably over higher fat foods, and several of the other trends also match the recommendations.

4. Setting objectives for a nutrition policy

4.1 Nutrient goals, and food goals or forecasts

At nutrient level, it is useful to distinguish between nutrient goals (such as only 30-35% of a population's per capita total daily energy intake being from fat, and only 10% of the fat being saturated fatty acids) and nutrient recommendations, such as those contained in the recommended dietary

allowances (RDAs) - or recommended daily intakes (RDIs), which amount to the same thing. Nutrient goals are recommended population averages. RDA/RDIs, however, are recommendations designed to cover most individuals in a population. They will therefore by necessity exceed the recommended averages, often by two standard deviations.

Both of these concepts, which will not be discussed further here, apply to nutrient intakes at a population level. They are useful mainly for nutrition policy planners, as a basis for the discussion of food goals and food production forecasts with food producers and manufacturers. Nutrient recommendations and goals also have a place in the process of evaluation of nutrition policy.

Food goals or forecasts are long-term (10-15 years) projections of desired changes in food consumption patterns. They will usually be set for rather broad food groups and are based on knowledge about "nutrient profiles", which show the actual consumption by food group in any given population. For example, in the Norwegian situation, available information (Table 1) shows that the main foods contributing to the population's fat intake are margarine, meat and milk. If the total fat intake of the population is to be lowered, these food groups would obviously have to be considered in the attainment of this nutrient goal.

Obviously, food goals can only be set at a national or regional level by people who know and understand local food traditions and concepts as well as modern developments and can therefore propose changes that are realistic and feasible. They have to be established in consultation with food producers and manufacturers as well as consumer representatives, whose acceptance of them will indeed be a prerequisite for the success of the nutrition policy.

Goal-setting is usually done on a relatively long-term basis. It should also be a dynamic process, since changes in food technology, scientific knowledge or food consumption patterns may necessitate revisions from time to time.

Food goals are indispensable not only for planning but also for the evaluation of action taken in a nutrition policy context. They will be the standard against which performance is measured. Table 2 shows Norwegian dietary pattern development with regard to fat against food goals in the first 11 years of nutrition policy implementation. It has to be noted, though, that the food goals indicated here were not actually perceived as such when they were established in 1975. They were, in fact, a blend of forecasts and goals which also took proposed nutrition policy activities into consideration. They have proved very valuable in assessing the food and nutrition policy.

Dietary guidelines (see section 4.3), i.e. recommendations to the population on how to eat, have to be based on the above two sets of recommendations on nutrient and food levels.

4.2 Discussion: nutritional recommendations, goals and forecasts

It appeared that most countries represented in the meeting had already established nutrient-level goals and recommendations. These seem to be uncontroversial, probably because they do not touch any vested interests.

It was discussed whether an international organization such as WHO might have a role to play in designing RDA/RDIs, since their establishment is resource-demanding in a small country. It was, however, pointed out that

Table 1. Percentage distribution of total energy and fat among foods entering private households in Norway - food budget surveys, 1980-1982

Food	Fat	Total energy
Cereals	3	24
Cakes	2	2
Potatoes and products	1	5
Vegetables	-	1
Fruit	-	5
Meat and offal	20	11
Fish	2	2
Eggs	3	2
Milk	14	11
Cream, ice-cream	6	3
Cheese	7	4
Butter	7	3
Margarine	27	11
Other fat and oil	4	1
Chocolate, sweets	3	2
Sugar, etc.	-	8
Spirits, etc.	-	2

Source: Annual Report of the National Nutrition Council, 1984.

although such recommendations are based on a common human physiology, they will in practice vary slightly between countries according to food patterns and traditions.

There are differences between countries as to who is responsible for establishing nutrient goals and recommendations. In the Netherlands, the task is delegated to the Nutrition Council. In the Nordic context, the Nordic Council appoints an ad hoc expert team with representatives from the five Nordic countries. They draw up a joint recommendation that is subsequently refined in each national context. In Hungary and Poland, the Institutes of Nutrition are responsible for the formulation, while in the United States this is the responsibility of the National Academy of Sciences.

Food goals/forecasts are so far less common. Apart from Norway, they have been discussed in the Swedish nutrition strategy report and are foreseen in the Finnish nutrition policy, in which they will extend up to the year 2000.

At first glance, the establishment of food goals may seem to be a controversial subject; but according to those who have tried it, having clear guidelines to follow is eventually to the advantage of all parties concerned. Food producers and manufacturers thus get straight information on how health policy-makers are going to try to influence consumption and hence their markets. Setting food goals gives nutritionists an opportunity to discuss nutrition and health in terms that are meaningful to agriculturalists and industry. For traditional nutritionists to discuss nutrition in terms of tons

Table 2. Main sources of fat in the Norwegian diet, 1975 and 1986,
compared with forecasts (in kg fat per capita per year, wholesale level)

Food	Fat content %	1975 kg	1986 kg	1990 kg
Milk	3.9	6.6	4.27	5.28
Low fat milk	1.5	-	0.6	-
Skimmed milk	0.1	0.03	0.03	0.06
Cream	35	2.35	2.42	2.28
Cheese	27	2.78	3.56	2.78
Butter	80	3.68	3.76	5.2
Milk fat total	-	15.44	14.64	15.60
Margarine	80	14.08	10.72	10.0
Other fats	100	4.1	4.0	4.2
Meat	20	9.8	10.22	9.0
Total fat from these products in kg per year		43.42	39.58	38.80
Percentage of total energy in diet		38.5	32	32

Source: Annual Report of the National Nutrition Council, 1987 (table 31).

and hectares rather than in milligrammes may imply a considerable widening of their understanding of their own discipline. Prices, taxes, subsidies and customs tariffs further add to the complexity but also provide additional policy-making opportunities. Moving from the "plate" dimension to the "field" and the "storehouse" dimensions will be a challenge for the public health nutrition profession.

4.3 Dietary guidelines

Dietary guidelines are quite distinct from nutrient recommendations/goals and food goals/forecasts. Whereas all the latter are for planners, politicians or researchers, dietary guidelines are for the public (which, of course, includes the above). The meeting discussed dietary guidelines at some length, as they were seen to be an important tool in increasing consumer awareness.

Most of the countries present had some kind of standing scientific advisory body charged with the task of formulating dietary guidelines. A few had only ad hoc appointed bodies, and Denmark did not have an advisory body in nutrition at all. For a further discussion on the function and composition of such bodies, see section 7.

How conclusive should the scientific evidence be before an official body gives advice? This is a perennial question in nutrition, which is only one of many aspects of lifestyle that may contribute to the causation of illness. There seem to be two, often opposite, schools of thought here:

- some would wish that nutrition scientists be implored not to give any advice until they are absolutely sure that they have conclusive evidence and a full overview of cause and effect;
- others would maintain that even in the face of imperfect knowledge, when there is reasonable certainty about etiology of illness, a nutrition scientist is morally bound to say something rather than having people succumb to ill health which could have been avoided.

It was suggested that the divergence between these schools of thought was mainly due to differences in personal temperament in their adherents than to the state of scientific knowledge in itself.

4.4 Consistency of advice

Contrary to what is often believed, official dietary guidelines have not changed much over the past 25 years. Divergent opinions and stray guidelines usually emanate from unqualified people who call themselves a nutritionist, which in most places is not a protected title. Official bodies charged with the formulation of dietary guidelines have to seek a balance between finding the least common denominator on which all experts agree, and keeping the succinctness of the message.

All participants underlined the importance of maintaining, even cultivating, the scientific credibility of the officially appointed body. Public credibility is a fragile commodity that can easily be lost. Already people are of the opinion - in spite of demonstrated fact - that nutritionists cannot agree among themselves. This easily leads to cynicism on the part of consumers ("Eat carrots while they are still good for health"). When scientific knowledge advances, as it does all the time, it is important to present new findings in a pedagogically well considered way, so as to avoid the impression of having taken sharp turns.

Should the dietary advice originally formulated turn out to be less than precise, it has rarely done any harm to public health. As an example, the advice on across-the-board low-salt intake was quoted. Likewise, there has probably been no harm done by the advice given concerning the polyunsaturated/saturated fatty acid ratio, which will shortly have to be refined considerably as our knowledge about the health effects of individual fatty acids increases.

Different degrees of certitude are, however, necessary for different nutritional problems, depending on their consequences for health and on the possible side effects of the advice.

Pragmatism should be the guiding principle in the formulation of dietary guidelines: what will be the practical consequences of the recommendation, and how feasible is its application at different levels of the food chain?

In nutrition policy-making it is conceivable - at least if one belongs to the second school of thought mentioned above - that one will have to live and plan with uncertainty. Unlike the earlier era of public health planning, when

infectious diseases with their simple etiology were a major health problem, we are now in an infinitely more complex situation. Faced with multifactorial diseases, the health planner has to accept action being taken in the face of incomplete evidence.

4.5 Frequency of revision

The group also discussed the question of how frequently it might be considered desirable to revise nutrient goals and recommendations, and dietary guidelines.

In the United States, a five-year period for the revision of nutrient recommendations is considered reasonable (although a longer period has now elapsed since the last recommendations were published). This might give enough time to review new evidence, to discuss and digest the recommendations of different committees, etc. In other countries with a less active nutrition science community, this interval was thought to be too short to manage in practice. Most of the participants, however, admitted to using the US National Academy of Sciences' RDAs as a basis for their national deliberations.

Another argument against too frequent revisions of RDAs and nutrient goals is that since these are used as standards for quality regulations, they are often the basis for long-term decisions about food production and food planning - hence changes may have costly consequences.

Dietary guidelines should also not be revised too often. On the other hand, new evidence in one field may warrant specialized advice. Sometimes one finds that even well considered advice is misunderstood by the public, and leads to unintended results. For example, in Poland people were advised to eat less highly treated soybean oil, as its lipid peroxide content had been shown to be atherogenic. The public interpretation, however, was that soybean oil of any kind should be restricted in the diet.

This points to the importance of a more or less continuous feedback system, which will show the actual consequences of advice on people's food behaviour, taking into account both actual consumption and concomitant attitudes, beliefs and expectations about food.

There is sometimes sudden pressure on government bodies to give specific advice in unexpected areas. The example of the sudden popularity of selenium in northern Europe was referred to. Because of press attention and subsequent popular demand, it became necessary for nutrition advisers to go into detail about this micro-nutrient, although the scientific evidence for its importance in the etiology of cardiovascular diseases was not finally established. These situations arise all the time, and there is no standard way in which they can be tackled. They add to the uncertainty, and excitement, of nutrition policy implementation.

5. Measures for nutrition policy implementation: food availability and quality

Measures or tools for the nutrition policy-maker to use in order to influence the consumption of food are also found in areas that are not necessarily the natural remit of health authorities - hence the need for intersectoral collaboration.

Nutrition policy implementation activities can largely be classified into those that concern the availability of food, those that attempt to influence the quality of food and those that concentrate on the extension of knowledge about food to the public or the factors determining the choice of food. The consultation considered all three kinds of activities, starting with those concerned with the availability and quality of food.

5.1 Measures that influence food availability and quality

A discussion of possible areas of action produced the following list:

- agricultural production, including fisheries
- food technology development
- food manufacturing practices
- wholesale and retail marketing systems
- food standards, legislation and regulations
- food prices, taxes and subsidies
- mass catering.

The list was not necessarily considered as exhaustive and the items are not given in order of priority. Furthermore, it was obvious that only a few of the above areas could be discussed in the course of the few hours at the disposal of the Consultation for this subject. Participants chose to concentrate on:

- market forces and food availability
- the development of new food technologies
- mass catering
- wholesale/retail marketing systems.

Information was also given on the impact of price on food availability and on the experience of the Heartbeat Wales project in the United Kingdom.

5.2 Marketing forces and food availability

The food industry's response to consumer demand will not necessarily be direct, but will depend on the structure of the industry in question. Industries competing for market shares will have to be alert to all forces influencing the market, including consumer demand. If there is a monopoly situation or if marketing is organized, e.g. through a dairy marketing board, there may be less sensitivity to consumer demand. It has, for example, been seen that in spite of expressed consumer demands, low-fat dairy products have not been introduced since dairy marketing boards could not figure out what to do with excess butterfat production. This was the case in Norway for many years in spite of the nutrition policy. When milk with 1.5% fat was introduced in Norway in 1984, it was an immediate success, capturing 30% of the market from that for 3.8% fat milk.

There are great differences between countries in the European Region with regard to their degree of health consciousness - on the part both of health workers and of the population in general. In many European countries today, health is a good sales argument.

Industry may thus decide to go along with the recommendations of nutrition policy-makers and launch nutritionally improved products. It is then important that this initiative is followed up and supported from the health side. An example was given from Norway, where a food manufacturer

obliged by producing some low-salt products in 1973, which never took off since there was no follow-up from health workers or others who might be in a position to draw attention to the desirability of such products. The same producer now feels that there is a better chance for sales of low-salt products and is ready to try again. There are many examples where positive collaboration has been successfully carried out, as in Heartbeat Wales.

In the Netherlands, cooperation with industry and trade is considered essential, if only to try to reach agreement on messages to be given to the consumer. In particular, its purpose is to avoid conflicting information, to increase the amount of information available to the consumer, and to optimize the timing of the promotion of healthy diets and foods.

Industry's commitment to collaboration may be cyclical, depending on how it judges market interest. However, this does not necessarily matter to the nutrition policy-maker, who can afford to wait through periods of low interest until there is a new peak. In Norway, collaboration between industry and the Nutrition Council has continued throughout the 12 years that the policy has been in existence.

Establishing standards for identity of foods, taking nutritional aspects including compositional requirements for nutritional claims into account, is also important in nutrition policy implementation. It has to be undertaken by an independent authority such as a nutrition advisory board. Moreover, it is usually welcomed by the serious food industry, as it makes planning easier and cleans up the market in relation to unclear claims. The area ranges from the establishment of quality standards to pure nomenclature: When is a low-sodium product really low-sodium? What does "without sugar added" really mean? Rule-makers in governments will need to seek a balance between firmness and flexibility when making these decisions.

5.3 New food technology - biotechnology

New genetically based technologies are likely to have a deep impact on future food production. It is, however, impossible to foresee what direction product changes will take.

Even today, the food supply situation is difficult to monitor. Traditionally produced tomatoes will, for example, vary in vitamin A content by a factor of 300. With new technologies for genetic manipulation, this variability may increase further.

Denmark is preparing legislation whereby all newly bred plants have to be approved - also from a nutritional point of view - by the Danish Food Agency. The industries concerned are at present lobbying vigorously against this legislation, which, they argue, may be an impediment to innovation; if rules are stricter in Denmark than elsewhere, the producers will be at a competitive disadvantage and will have to move research and development out of the country. The final parliamentary bill may eventually be modified. It is of course also possible that too strict regulations may severely raise the cost of entry into the market and therefore have long-term implications for the development of this kind of food producing technology. The electronics industry in the United States was cited as an example of a situation where free access to the market had stimulated innovation. What industry would like to see in the area of biotechnology is uniform rules between countries, at least within the European Community (EC).

Producers are highly dependent on maintaining public confidence in the wholesomeness of food products and on avoiding irrational fears among consumers. As an example of such irrational fears, the fate of food conservation by irradiation was mentioned. Producers using new technologies such as bioengineering will clearly want to learn from past experiences to avoid getting into similar situations.

Before they can approve new foods or technologies, government agencies will have to be as certain as they possibly can about their healthfulness. There have already been examples of food that has dubious qualities: mould-resistant grapes were released on to the market at one stage but withdrawn when they were found to kill chickens. Tomatoes with inborn pesticides are currently being developed, but it remains to be seen whether their biocidal activity is limited to pests.

Apart from nutrient variability, genetic manipulation may lead, for example, to an accumulation of toxic substances in food or an increase in anti-nutritional factors such as phytate or oxalic acid and tannins.

In the United States, the problem of side effects of unknown food has been foreseen for some time. One solution would be to request manufacturers to carry out post-marketing surveillance. This has already been done in the case of, for example, aspartame. The burden of proof of safety thus falls on the manufacturer.

The following are some of the sets of guidelines that already exist:

- United Nations Protein Advisory Group. "Guideline for preclinical testing of novel sources of protein", 1970 (PAG Guideline, No. 6);
- United Nations Protein Advisory Group. "Guideline for human testing of supplementary food mixtures", 1970 (PAG Guideline, No. 7);
- United Kingdom Ministry of Agriculture, Fisheries and Food. "Memorandum on the testing of novel foods";
- United States: Imitation and substitute foods as defined by the US Food, Drug and Cosmetics Act and the US Code of Federal Regulations, Title 21 101.3(e).

Although hardly complete in their coverage of these complex questions, all the above publications might contribute to the development of a new set of necessary regulations in an unexplored field.

5.4 Mass catering

The mass catering market is rapidly increasing. As seen in the example from the United States, the number of people eating out of home is growing by the year. The catering industry is in rapid expansion.

In December 1987 the Regional Office for Europe organized a meeting on the "Opportunities for better nutrition through mass catering", at which people from the sector discussed possibilities and problems in modern mass catering and made recommendations for improvement. The full report of this meeting is available from the Regional Office's Nutrition unit.

The following is a brief summary of the discussions and conclusions reached at the meeting.

The catering sector consists of the private and the public sector. In the public sector, the types of facility include those in old people's homes, military services, prisons, hospitals, schools and kindergartens, as well as employees' canteens. Governments are usually the largest caterers, so the formulation of a conscious policy on the use of public mass catering may be feasible, especially in the context of a nutrition policy.

When introducing a healthier approach in any mass catering establishment, the advantages of a strategy of "unobtrusive change" were emphasized. This was contrasted to the "healthy alternative dish of the day" strategy, which is often seen in mass catering establishments in countries where healthy foods are a good selling argument.

Changes in catering should take place at all stages of the catering food chain, i.e. not only the kitchen level but at the levels of planning, procurement, storage and, finally, preparation and serving.

Discussion in the group soon concentrated on school catering. Not all countries have this form of mass catering. In those that do, it was seen as particularly important to make use of the pedagogic opportunity to "wean" children on to healthy food behaviour. It was questioned whether it was relevant or useful to apply nutritional standards to a single daily meal. The argument for keeping nutritional standards was that without them there could be a tendency to disregard nutritional aspects in the school feeding programme altogether.

A thorough survey of school catering was undertaken in 1985 in the then 10 member states of the EC, which is now considering the preparation of a further report on this question. Another example of continued interest in school catering was given from Sweden, where the authorities envisage making the school meal obligatory - as it is in Finland.

Healthier strategies in mass catering may not be any more expensive than less nutritionally sound practices: the experience of Heartbeat Wales showed that the introduction of a healthier regime in hospitals led to overall food savings of 12% and considerable savings on therapeutic diets.

In the Norwegian experience, the actual food costs were minimal compared to the costs of personnel, but the food offered was mainly supplementary, i.e. milk and fruit. In Finland and Sweden, where a full meal is provided, food and personnel costs are about the same.

Finally, the importance of the surroundings in which food is eaten was mentioned; these may be as crucial for health and wellbeing as the food itself.

5.5 Wholesale/retail marketing systems

Apart from the wholesale/retail marketing structure itself, the measures available to nutrition policy decision-making in this area include customs tariffs and importation restrictions (often seasonal).

It was mentioned that the intended dismantling in 1992 of tariff boundaries within the EC should prove a boon to healthy nutrition, and make nutrition policy easier in all EC member states. It may be questioned whether there will really be a free market or rather a free oligopoly, since a limited number of big companies control most of the trade in food.

In the United States, there are some 130 or so programmes engaged in healthy food promotion. The common definition of terms may be problematic, as discussed above: for instance, what are low-calorie foods versus reduced-calorie foods? Some effort will have to go into providing clear definitions in this regard.

In the United States, there are also two firms that sell their expertise in the marketing of healthy foods to other firms. In the European Region, there is less experience of this type of marketing. The Danish Food Agency was actively cooperating with supermarkets in 1984, around the time that the Danish nutrition policy was introduced. This resulted in one supermarket chain running a campaign for a healthy diet. It was so successful that it was continued for two successive years. After that time, however, the supermarket wanted a different theme on which to centre its marketing efforts.

The Swedish experience in the food and exercise campaign in the 1970s, which also had a heavy input from industry, has already been mentioned. This effort, too, had a limited lifespan. One feature of this initiative was that shops had to meet certain health criteria established by the National Board of Health and Welfare in order to be included in the campaign.

In the Netherlands, in-store promotion of healthy nutrition has been seen as a good opportunity to influence consumers. In the food store, the time and place for decision and behavioural change by the individual coincide. Many other factors in this particular area are also favourable to change. For instance, the food retailer has a clear interest in following the existing trend among consumers. Different kinds of consumer service provide opportunities for nutrition information in the retail area: labelling, distribution of product leaflets and in-store demonstrations. Where product information is given, nutrition information may be added. Retailers are often more able to get messages across than are health people, and they may use far more efficient marketing strategies. They may, for example, manage to promote healthy food as something fashionable rather than simply healthy. Above all, in-store promotion has the potential to reach all population groups, including those less accessible to other forms of nutrition education.

A scheme was described for a nutritional audit of local food retail chains and single local supermarkets by local action groups interested in healthy food. It called for the investigation of eight different aspects of in-store promotion: labelling, stocking, positioning in shop, location of shop, etc. This information, when collected, could either be used privately *vis-à-vis* the shop or for publication, with or without a comparison and ranking of shops according to nutritional performance. Publicized ranking of shops would, at least in some countries, be a strong incentive for change.

It was pointed out that there was a certain danger in concentrating on healthy foods and losing sight of the more important aspect, namely healthy diet. In this regard, the whole is always more important than its component parts.

5.6 The use of price to influence food availability

The use of price is commonly given high priority in nutrition policy-making. It is often considered as one of the most potent tools for shaping nutrition behaviour, and there is no doubt that a healthy diet could easily be the cheap alternative in most European countries today. Our knowledge in this complex field is, however, far from complete. Some experiences were described in the course of the discussion.

Price may indeed change consumption, but its use as a tool for nutrition policy-making is weakened by the limits that are imposed by policy-making outside the nutrition field. The influence of price on consumption may, for instance, be dependent on whether the product in question has a substitute to which consumption will swing if prices are increased. There may thus be more potential in using price as a tool for changing consumption within food groups than between them.

In a small Norwegian survey asking people what they regarded as important factors for their choice of foods, the most frequent answer was "time". There was less emphasis on price. A dairy survey in 1987 showed that 70% of consumers wanted access to low-fat (1.5%) milk, since they wanted less fat, but only 1% mentioned the lower price as an argument for this. This does not necessarily mean that the price is not eventually of importance.

Another example from Sweden, where small changes in the fat content of the types of milk introduced on to the market had considerable consequences for sales, highlighted the intricacies of consumer demand. It seems that taste, marketing strategy and consumer knowledge all play a role alongside the cost of food.

Quality legislation seems to be a weak tool. It is expensive to implement and provides very little change in total diet and hence health. Again it was stressed that total food habits rather than single foods make the health difference.

5.7 Planning a nutrition intervention: lessons from Heartbeat Wales

The lessons to be learned from the project Heartbeat Wales (1985-1988) in planning and executing a thematic intervention in the health area were summarized as follows.

- (1) The health rationale underlying the campaign has to be acceptable to politicians, and they must be able to perceive support for it as being in their own interest.
- (2) It is necessary to develop a corporate identity for the idea one wishes to sell. The choice of a logo, for example, is important in providing a focus of attention.
- (3) The planning phase should actively involve health professionals, politicians and consumers alike.

Some concerns and pitfalls were highlighted as follows.

- (1) It is important to be aware of who among the people involved is the more vocal - and who is not - so as not to increase existing inequalities unwittingly.
- (2) Unrealistic target setting can kill a good idea.
- (3) It is better to use existing networks for the delivery of services rather than to create new ones.
- (4) One must beware of "analysis paralysis".
- (5) Those who have the responsibility for taking initiatives should be totally conversant with the objectives and rationale of the project.

(6) Monitoring and evaluation is often carried out by entities external to the programme, in the interest of objectivity. This is laudable, but there may at the same time be a risk that the point will be missed, i.e. the evaluators may not have entirely understood what the project set out to do and may consequently have failed to evaluate it according to its aim. Evaluators should therefore be involved in the project at the objective-setting stage, but should otherwise retain their independence.

(7) The cost of implementing the project should be estimated at an individual as well as at an organizational level.

The resources needed for such a programme need not be enormous. In the case of Heartbeat Wales, they were not considerable and originally consisted mainly of support for a limited number of staff. This low funding subsequently forced the project to enter into relationships with other organizations, which may have been all to the good.

6. Measures for nutrition policy implementation: extension of knowledge to the public

To start the discussion, the Finnish, Norwegian and Swedish experiences were presented as examples of large-scale nutrition education campaigns.

6.1 Finland - the North Karelia project

The Finnish project was started because of public and political concern over the very high cardiovascular mortality demonstrated in Finland in the 1960s. Today it is easier to see that this mortality may have been due to many lifestyle factors, and also to a genetic disposition in the population. However, in 1972, when the North Karelia project began, it was one of the first of its kind and little was known about prevention campaigns and their potential.

The intensive campaign combined a population approach with screening for high-risk groups, and involved simultaneous actions focusing on:

- increased health knowledge in the population
- persuasion
- knowledge of practical skills
- social support groups
- environmental change
- community organizations.

The dietary advice given was radical at that time, although today it would be considered trivial.

Evaluation was built into the project from the beginning. It included a survey covering 6.6% of the population, who were studied with regard to anthropometric and biochemical parameters. Overall food behaviour was also investigated, using food frequency questionnaires and a few quantitative measures.

The effects were initially also radical in that cardiovascular mortality declined more in North Karelia than in the rest of the country. It stayed above the national average, however, before levelling off in 1982 and apparently increasing in the past few years. Many explanations have been offered for this, including a recoil effect (campaign fatigue), changes in

demography, possibly with selective mortality in vulnerable population groups, selective emigration out of the area, or diagnostic differences over the period.

Overall, the average serum cholesterol in the male population was reduced from 7.1 mmol/l in 1972 to 6.3 mmol/l in 1982.

It seems as though, whatever favourable development took place, it stopped when the intensive phase of the intervention ended.

One particularly intriguing hypothesis has also been put forward linking cholesterol with the consumption of boiled coffee. A difference in serum cholesterol levels of as much as 1 mmol/l has been shown to exist between drinkers of boiled coffee as compared with drinkers of filtered coffee; and in North Karelia, which was a 100% boiled-coffee area in 1972, 50-60% of the population had switched to filtered coffee by 1982.

6.2 The Norwegian nutrition campaign

The campaign was launched in 1982, in line with a long tradition of promotive activities carried out by voluntary agencies and the Government. Nutrition education has, for instance, regularly featured in the state-owned television's most popular programme, "TV kitchen".

Prior to the campaign, the Nutrition Council had worked out the scientific basis for nutrient recommendations and suitable nutrient goals. These had then been converted into practical dietary guidelines related to food, such as "Eat more fish", "Change to low-fat milk" and "Eat less meat". General pedagogical principles for the campaign strategy were also formulated as follows:

- the Norwegian dietary pattern is the point of departure;
- keep the positive aspects of this dietary pattern;
- use positive advice: what can you eat more of;
- underline the importance of everyday food;
- only small changes are needed;
- correct several small weaknesses at the same time;
- stress that "Eating is life" rather than "You can die from eating", etc.

The campaign enlisted the support of many voluntary agencies already working in this field. Consistency of advice was ensured through coordination by the Nutrition Council, making all pull in the same direction. The campaign called on the public itself to make an effort: TV spots advertised the availability of information material in post offices, and 70% of this material was actually picked up by customers. Information booklets were sold rather than given out free, etc.

Marketing professionals were used throughout. Sometimes their efforts were successful, and sometimes not. One useful feature of their advice was their insistence on simplicity, e.g. "Say only one thing at a time". Health professionals have a tendency to want to say everything at once.

Small evaluation schemes were built into the campaign. These included telephone interviews to learn about the public's understanding of and interest in the messages given. An account was kept of sales of information material as well as uptake of free handouts, as in the example mentioned above. Macro-level food supply trends are also regularly monitored in Norway. The overall fat energy percentage, for example, decreased from over 40% in 1975 to 36% in 1987. This is in contrast to developments in most other European countries.

It is now felt that since the campaign has lasted for some years, the emphasis should be shifted away from central efforts towards more local projects. The role of the Nutrition Council would then be more to inspire and facilitate.

6.3 The Swedish diet and exercise campaign

The origins of this campaign go back to the early 1960s when the first dietary guidelines were formulated. At that time, they were regarded as very radical.

Planning of the campaign started in 1969, and it took off in 1971 with the enthusiastic collaboration of the food industry. Annual themes were introduced in 1973 with "Begin the day better"; in 1975 the theme was "Live better", and in 1976 the campaign focused on increasing bread consumption.

The first campaign emphasized the food pyramid. This was seen as an improvement over the food circle that was common at that time. A certain effect on sales, especially in the larger supermarket chains, was noticeable.

The bread campaign had some unusual features, such as the central slogan: "The Board of Health wants you to eat 6-8 slices of bread a day". This became the subject of many popular jokes. The proportion of interviewees recognizing this campaign, 80%, was unusually high. Some 70% of those interviewed just after the campaign also remembered the message given. The immediate effect of the campaign was a levelling off of the decreasing trend in cereals consumption, which was noted at national food balance sheet level, and the consumption of flour and bread has now increased by 10%. Bakers have also switched to much higher fibre contents in many breads.

A repeat survey in 1978 of knowledge about nutrition showed that while in 1971 only 30% of the population knew that bread and potatoes were not fattening, in 1978 this proportion had increased to 60%.

The effects of the campaign were regrettably partially offset by the simultaneous introduction of food subsidies, mainly on milk and meat. In the period 1973-1978, the subsidies increased from SKr 500 million to SKr 3500 million annually. The political motivation for the subsidies had little to do with health concerns.

Oddly enough, the exercise side of the campaign did not succeed too well. Apart from joggers, the population as a whole has, according to surveys, become more sedentary over the period.

6.4 Discussion

The discussion of these three examples covered a range of important practical aspects of the use of public education as an instrument for dietary change.

Recognition of the relationship between diet, health and wellbeing is of course not new. The common knowledge that dietary manipulation can actually reduce the risk of disease is, however, new to our time, as is the concept of personal responsibility for health outcome. These difficult messages have mainly been promoted in the context of health education. They coincide with a common demand among people, especially in northern Europe, for more control over and responsibility for their own lives. Concurrently, there is an erosion of popular confidence in allopathic medicine.

The Finnish example suggested that carefully conceived messages given through health education campaigns might not always be as decisive as their originators would like to believe. Health or nutrition campaigns may only be reflections of what are already public concerns, following existing tendencies. Little is known about the forces that shape such secular trends or about where people actually take their decisive messages from. This makes it reasonable to suppose that different types of educational message will be needed at different stages of social development, as the Hungarian participant pointed out.

It was suggested that motivation for changes in a person's lifestyle often come from negative experiences, such as the premature death of a relative or friend. Research on the use of fear as a motivating factor shows that it is useful in the short term but not for lasting effect. Continued negative sanctions may sustain better habits, and the knowledge of being in a high-risk group, such as middle-aged males, may also help to maintain change.

In Poland, a series of television spots using negative messages were heavily criticized, but at the same time they attracted a lot of attention from the press and from the public.

Experience of the effect of warning statements on public behaviour in the United States shows that they have a very limited life. People have a way of blocking a generalized negative message as being personally irrelevant.

Health in itself is hardly of interest to people. Their concern is rather about the effects of health. Sustained changes in lifestyle are shaped by expectations about what good health enables you to do. On the other hand, people do not daily think in terms of the health consequences of their actions. The same is also true of nutritionists, who may think about the effects of their own diet but not about consequences in areas outside their profession.

Nutritionists often get carried away by the obviously sound content of their messages and may not realise that these are not always understood by the hearers. Nutrition messages are often too complicated. An analysis of strategic items in the diet will usually show that unobtrusive changes, e.g. in the composition of the diet, may yield better health results than much heralded special schemes, especially in the area of mass catering. This, however, leads to a moral dilemma: to what extent should a nutrition policy-maker be allowed to manipulate people's diets clandestinely in a healthy direction, possibly depriving them of their right to "choose their own poison" or eat themselves sick. Why, however, is no such moral dilemma imposed on those who move people's diets in an unhealthy direction?

There is a degree of public confidence in the objectivity of government advice. This credibility must not be lost, and hence the means at the disposal of a government body for manipulating public opinion are limited.

This is a problem that industry, for example, does not have to worry about. Although the marketing techniques of a government agency may emulate those of industry, the former must choose its weapons with greater care.

Attempts may be made to misuse the name of a nutrition council or board of health, as mentioned by several of the participants. On the positive side, the public agency's authority provides an opportunity for collaboration, e.g. with voluntary organizations that wish to submit their information material to scrutiny so as to have the right to use the agency's stamp of approval.

Even so, the relationship is not always easy, and examples were given of the misuse of health authorities' names in collaboration between them and manufacturers. It can, for example, be difficult to control the final presentation of the agreed message. This should not discourage collaboration but does call for greater awareness on the part of the health authority and an insistence on clear agreements about the terms of this collaboration. Several examples were given from Wales, where as a matter of principle Heartbeat Wales has refused to endorse branded products but does approve particular types of food. The campaign has also endorsed schemes, for example, for the reduction of fat in meat products. An award system has been introduced, allowing manufacturers who comply with its terms to use the Heartbeat Wales logo. In the United States, the Department of Agriculture has allowed the phrase "according to national dietary guidelines" to be used on labels. In Norway, the Nutrition Council and the food industry have cooperated in producing information material.

Outright misinformation on nutrition from many sources is another problem. It is quite common and is often regarded as highly aggravating by nutrition professionals. Correction of the continual stream of misinformation may be a losing battle which takes up a lot of energy. It is important rather to cultivate relationships with serious and interested journalists who can be relied on to supply correct information and who can thus be very helpful in nutrition education of the public.

Collaboration between industry and health was again discussed at length. In a nutshell, the health side sells values while industry sells products. To some degree, the marketing techniques are similar, but a conscious effort is needed to make product promotion coincide with health goals.

The United States Government has actually tried to identify strategies to orient food production in a healthy direction. An example is the government-approved low-sodium product claim, which compliant manufacturers have the opportunity to use to their advantage. Experience with this particular example has been positive so far. Complaints from industry mainly concern feasibility, not the principle of establishing a government-approved claim. It seems as though the manufacturers are content to have the marketplace made fairer by having rules established by a disinterested party. In Norway, regulation of claims was actually introduced at the request of industry and not even perceived as a tool of nutrition policy.

There is concern that current prohibitions observed by most countries might change in the future. An example was given from the United States, where a proposal to permit such claims has been published for comments and a final rule is expected in the near future. Proponents of this change argue that a recent Supreme Court decision upholding freedom of commercial speech as being granted by the Constitution applies equally to food labelling. Such an

interpretation could mean that government agencies would only be able to ensure that such claims were truthful.

This situation leaves open the possibility that some truthful claims may be used in such a way as to mislead the consumer. For example, the statement that "Experts believe dietary fibre reduces the risk of cancer", when placed on the label of a fibre-containing product, would imply that the product in itself would lower the risk of cancer. In reality, what experts would mean by the statement is that the fibre content of the total diet was fundamental in reducing the risk of cancer. One problem about such claims is that they may become too numerous, and hence too complicated to be of actual value to the consumers. Currently there is a danger of just that happening to the low-sodium claim in the United States, where regulations now define four different categories of low-sodium products.

If forced to accept the use of health messages in nutrition labelling, governments need to find ways of keeping them in a proper perspective so as not to mislead consumers, but rather to contribute to a better understanding of diet-disease relationships.

6.5 The use of computer programmes in nutrition education

Because of the complex composition of food, the area of nutrition is particularly well suited to the use of computerized information schemes. There are many examples of software packages that contain food composition data bases and provide instant analysis either of individual interviews or of planned menus. They can therefore be used, for example, in dietary surveys, providing immediate feedback and thus hopefully increasing participation rates.

In the Netherlands, a supermarket chain provided personalized dietary advice with the help of a computer programme based on a food frequency questionnaire designed with the assistance of the Bureau for Food and Nutrition Education.

In Norwegian schools, computer teaching of children aged 9-11 years is done using nutrition examples, thus hopefully combining "typical" interests of boys and girls respectively.

In Denmark, the computer programme for meal planning designed and produced by the Danish Food Agency has unintentionally wiped the other programmes off the market, probably because it commands greater authority than they do and has access to a larger data base than any other programme.

In both Denmark and the Netherlands, a nutrient and allergen data bank for allergic persons is being established, with the help of interested food manufacturers.

It is further conceivable that the interests of the food industry and health educators could meet in the production of computerized data banks and programmes, including a form of food games.

6.6 Health workers' knowledge about nutrition

A survey of awareness of nutrition issues done in the United States in 1983 and 1986 on a population sample and a sample of physicians showed that the public was considerably more aware of the preventive effect of reducing high blood cholesterol than were the physicians (see Table 3).

Table 3. Cholesterol awareness - correct responses

	1983 (%)	1986 (%)
Public	64	72
Physicians	39	64

Source: Schucker, B. et al. Change in public perspective on cholesterol and heart disease - results from two national surveys. Journal of the American Medical Association, 258(24): 3527-3521 (1987).

Surveys show that a sizeable proportion of the public get dietary advice from health workers - physicians and nurses - who are usually not too well trained in nutrition.

Nutrition training in medical and nursing schools is not yet commonly established. In some countries, a limited number of hours is devoted to the subject in medical training at different levels. A workshop on this topic will be organized by the Regional Office in 1989.

Postgraduate courses in nutrition for physicians have been tried in different countries with varying degrees of success. Attendance rates depend on whether there is a loss of income during the training period. In Norway and Sweden, there has been good experience with courses for occupational physicians. In the Netherlands, however, it has proved difficult to arouse interest in such courses, and instead a short course in nutrition is given during the training of general practitioners. In Poland, there was initially a low response to a postgraduate nutrition course until its name was changed to "Prevention and treatment of metabolic diseases", whereupon the same course became very popular. When offered as a method of treatment, it seemed as if nutrition became more interesting to the physicians.

There is also a lack of adequate teaching material in nutrition for health workers in most countries. Such material has to be locally produced, although some aspects of nutrition are of a general nature. A Finnish book on nutrition for medical students, produced in 1988, may be of a wider interest.

The EC is planning to carry out a study of existing nutrition training in medical schools and will propose a minimum content of such training in university curricula.

Possibilities for nutrition training of health workers are considerably better in the United States, where the nutrition societies have taken it upon themselves to see to it that nutrition is introduced in the relevant curricula and to offer postgraduate training.

It was suggested that one way of increasing health workers' interest in nutrition might be to measure their performance in the area, e.g. by including

this in regular project monitoring schemes. This might create some pressure on the professions to make themselves better qualified for the task.

Heartbeat Wales offered incentives to general practitioners to become interested in lifestyle issues, including nutrition. The whole office of the physician was involved in the scheme, including the receptionist, and distance-learning materials were offered. A general protocol was established on how to advise on nutrition, smoking cessation and physical exercise.

It was pointed out that, although there are from 1 per 15 000 to 1 per 50 000 nutritionists per head of population in the countries represented at the meeting, there will never be enough nutritionists to give personalized advice to everybody. Nutritionists must therefore concentrate on training members of other professions. This may entail a status problem in that physicians especially are not open to education by what they perceive as a "lesser" profession.

Nutrition has all the problems inherent in any "young" profession, i.e. those of recognition of titles, of certification of education and of organization in general. In this respect, it is similar to preventive medicine.

7. Organizational structure for nutrition policies

7.1 General

As was amply demonstrated by the consultation, there appears to be no such thing as one ideal "model" structure for a nutrition policy. The administrative and advisory support structure for the implementation of a nutrition policy has to be specifically created within each national context.

The Consultation was, however, unanimous about the need for a national structure, regardless of how it might eventually be formulated. The Danish situation was an exception - here an implementation structure had been explicitly avoided, as it was believed that it might dilute interest and action in nutrition policy-making. In the other countries represented, it was felt that the lack of a focal point in an unstructured situation would often result in nutrition policy measures being ad hoc and uncoordinated. Nutrition-related decisions and advice tend to go in differing, often contradictory directions.

In two of the countries represented, the organizational structure had been given low priority with regard to resources. In both cases, the nutrition policy implementation structure had been combined with food safety administration; this had resulted in a low priority being given to nutrition in comparison to food safety, which has considerably more public appeal and usually requires rapid, visible action. Resolution of the problem of accommodating nutrition and food safety in a way that makes public health sense should be given high priority. In Europe, no good examples could be found. Conceivably, the United States has something to teach Europe in this respect. It was noted that the food and nutrition area in the United States has considerable resources at its disposal.

7.2 Intersectoral coordination and collaboration

In practice, intersectorality presents a problem common to all the countries. In Denmark, for example, at least four ministries are responsible

for different aspects of nutrition policy - i.e. those in charge of education, the environment, health and agriculture. In other countries, an even greater number of ministries may take part in nutrition policy implementation. This fragmentation can easily lead to uncoordinated action. A strong coordinating secretariat may conceivably be able to oversee the whole field of action. No example of this could, however, be given.

Some countries, such as Norway, have a specific interministerial coordinating committee that is supposed to meet regularly and make decisions on nutrition-related matters. This has the advantage that the different ministries are obliged to be represented on this body, and will therefore always be willing to take part in discussions on nutrition policy questions. Taking action is, however, quite another matter, and a number of problems have been experienced in the organization of such bodies. For instance, since the committee is supposed to be action-oriented and decision-making, it has to be rather high-level. Yet bringing high-level people from different ministries together in one room at the same time can be a gargantuan task, and hence tends to happen so seldom that the committee has little practical impact. In Finland, a solution to this has been found in the identification of committee members who are willing and able to represent various ministries although they do not always work in the ministries themselves. This particular body meets once a month and gives advice on matters of a practical nature, but does not have decision-making power.

Countries differ as to which ministries are involved in their committees and also as regards which ministry has the chair. Usually the chair is held by the ministry of agriculture (Finland), health (Norway) or, occasionally, the environment.

The actual identification of nutrition-related issues within each sector is one of the problems in intersectoral action. One ministry may be working on a subject that clearly has nutritional implications, but may forget to bring it to the attention of the committee. Correcting such a situation would require a strong and attentive secretarial function that could continuously identify or request identification of relevant issues in the different departments. Departments would also have to be convinced that they had something to gain from bringing issues up before an interministerial nutrition body.

Experience also shows that ministries may have problems with their priorities in conflict situations, since they usually have clients to whom they are obliged to be loyal. In such a situation, nutrition policy may be accorded less importance than, for example, the sectoral interests of farmers or industries.

7.3 The need for an advisory body

The participants agreed that there is an absolute need for a scientific, intersectoral advisory board in each country, which can keep decision-makers up to date on the progress of nutrition and related sciences. Such bodies have been established in most of the countries represented, the exception being Denmark where advice is sought from individual relevant scientists on an ad hoc basis. The composition of the bodies varies considerably, and several examples of different models were given.

In some cases, the scientific advisory board has been integrated into the interministerial coordinating committee. This seems to have the advantage of

making ministries and administrators more interested in nutrition activities, since they have direct knowledge of the scientific rationale behind these activities. This is the case in both Finland and Sweden. In Finland, the members of the advisory board are nominated by the ministries, and it is strengthened by a number of experts from various academic disciplines. In the Netherlands and Norway, the advisory and administrative functions are kept separate.

The issues to be addressed by the advisory board are sometimes chosen by the body itself, and sometimes decided for it by administrators. Typically, the board would be responsible for the formulation of nutrient goals and recommendations, and sometimes also for the formulation of dietary guidelines or other nutrition-related messages to the public. The board may also identify and advise on measures for nutritional improvement in different areas.

The periods for which the boards are nominated vary between annual, biennial or even longer periods. Several of the participants had experience only of ad hoc task-oriented advisory groups. The consensus of the Consultation was to recommend strongly the establishment of a permanent (standing) advisory board, which could enlist ad hoc assistance or set up subcommittees on different matters that might arise.

The need for the advisory board to be independent was stressed by several participants. This is partly because it might have to give advice on controversial matters, and also because it must preserve its credibility *vis-à-vis* the public. Few countries were, however, yet in the situation of the United States, where potential board members have to submit "conflict of interest" statements and make a full disclosure of, *inter alia*, their financial holdings.

The participants had experienced several practical problems in relation to their advisory boards. In one country, the board would demand an inordinately long time before issuing any report so as to be sure of giving scientifically unassailable views on the subject before it. This meant that it was of little use in the case of matters requiring rapid resolution. In another country, the board was viewed merely as a "discussion club" of little practical consequence to policy-making. It was suggested that sometimes the frequency of meetings was an indicator of the level of effectiveness: if its members met once or twice a year, this might be due to a lack of relevance of the board's work.

7.3.1 The role of nutrition institutes or nutrition units

In Denmark and Poland, the national institutions for food and nutrition have a combined function of scientific research and policy advice, and are focal points for nutrition policy implementation in the country. In that respect, they might be seen as initiators as well as executors of nutrition policy. Both institutions are part of the national administrative structure, with the advantages and disadvantages inherent in this. In Denmark, the research role of the institution has been limited to food, and only in 1987 was an academic research institution for human nutrition established in the country.

7.3.2 Executive functions

In countries with an official nutrition policy, the executors of the nutrition policy would be each relevant ministry. In the Netherlands, one of

the instruments for nutrition policy implementation - nutrition education - was made the responsibility of the Bureau for Food and Nutrition Education.

There is a great variation in the approaches to implementation - ranging, for example, from the conscious use of price mechanisms as a nutrition policy measure in Norway and Sweden to the decision in the Netherlands not to use such mechanisms in its policy.

7.3.3 Monitoring and evaluation

In the three countries with an official nutrition policy, the common way of measuring progress is to prepare reports on the food and nutrition situation. These are issued annually in Norway, every third year in the Netherlands, and on an ad hoc basis in Denmark.

The reporting format is shaped by the objectives of the policy: the rapporteurs will naturally look at progress in relation to original intentions.

In some of the district food-health policies in the United Kingdom, provision for measurement is built into the planning, with performance indicators on various aspects of health promotion.

7.4 The role of trade unions

Generally speaking, trade unions have little involvement in the nutrition policy-making process, although in some cases they are represented on marketing boards that nutrition policy-makers deal with.

Trade unions are naturally concerned mainly with their own secular interests. It may therefore be practical to deal with them separately if this is possible. In Wales, for example, there are 83 different trade unions, 40 of which were contacted by Heartbeat Wales. Some are of course easier to deal with than others in the nutrition policy context. Bakers' trade unions may, for example, be counted on as allies.

Some participants mentioned cases of the sugar industry mustering trade unions to protest against nutrition policy advice, on the grounds that less sugar consumption would mean loss of jobs. In general, most of the participants had experience of rather aggressive behaviour on the part of the sugar lobby, which appears to be very well organized both nationally and internationally. It was incidentally found somewhat surprising that the industry so zealously guards its markets in the industrialized countries, where sugar consumption is so high (around 40-50 kg per capita) that it can hardly be expected to increase very much, while there are large unexploited markets with low per capita sugar consumption in developing countries.

7.5 The relation between nutrition policy and overall health policy

Nutrition policy is an example of a type of policy intended to promote public health. At present, it takes several forms:

- it can be an independent nutrition or food and nutrition policy, ratified by the government or parliament (Denmark, Malta, Netherlands, Norway);
- it can be part of a national health policy, with a mandate that is usually spelled out in an action plan (Finland, Iceland);

- it can be part of an overall health promotion policy, with this component again spelled out in an action plan (Hungary);
- it can be implicit in "acts" giving the secretaries of relevant departments the mandate to "protect human health", which may be interpreted to include the provision of healthy food and nutrition (United States);
- it may be regionalized or localized, with action taken according to local district food-health plans (United Kingdom).

The concept of a healthy public policy which is often used today, not least by WHO, is a construct - it refers to any policy that contributes to human health.

It may often be more fruitful to focus on the process of policy development than on the policy itself as written down. It is not uncommon that governments prefer implicit action so as to avoid explicit policies, which are more absolute and demanding. A healthy public policy would have to be explicit about its health objectives, it would coordinate many different sets of activities, and it would definitely be directed towards health improvement.

8. Conclusions and recommendations

The group summarized the five days of discussions into a set of recommendations on the basis of experiences to date.

8.1 Definition of nutrition policy

There was an initial attempt to define nutrition policy, which proved to be no simple task. Proposals varied from "Nutrition policy is a food policy that explicitly takes health and nutrition into account" to "Nutrition policy is a coordinated set of actions, often initiated by governments, in order to secure the nutritional quality and safety of the food supply of the population, to promote health and to improve dietary habits".

"Policy" is, however, a word with different meanings in different languages, and so is "nutrition". It may not be worth the effort to try to establish a final definition.

8.2 Nutrition policy formulation

8.2.1 Scientific justification

The justification for having a nutrition policy at all is usually found in the relationship between diet and health. The lack of a consensus on this matter between medical experts is a problem. Without the majority of national experts agreeing on the existence of a relationship, it may not be possible to establish a nutrition policy. There will always be a degree of uncertainty in decision-making. Nutrition policy-makers may have to learn how to live and plan with this uncertainty. This should, however, not prevent nutritionists from continuing to seek better proof of the relationship between diet and health. The greater the scientific consensus, the easier it will be to move policy-makers and legislators into action. This is an area where more research is the only solution.

In the advocacy phase of nutrition policy-making, an "opinion-leader" approach should be adopted. It is important to find an entry point that gives a politically acceptable rationale on which politicians can act.

8.2.2 Objective formulation

A nutrition policy presupposes clear objectives as to what is supposed to be achieved. A warning was sounded against the setting of objectives that are not measurable.

It is necessary to be very explicit with regard to the type of action foreseen in a nutrition policy. Politicians may otherwise endorse a nutrition policy without having a clear understanding of the actions implied in the mandate they have given. The nutrition policy-maker will have to consider the feasibility of the objectives that have been set. Usually this can easily be foreseen. Most experience shows that committed people who want to accomplish the objectives of the policy will eventually be needed for it to succeed.

8.2.3 Strategy formulation

It was unanimously agreed that it is important for a nutrition policy to be comprehensive, as opposed to the fragmentary set of nutrition-related activities that is often seen in countries without an overall policy. At the same time the multisectoral nature of nutrition makes it necessary to have a range of strategies, covering a range of organizations.

To succeed in nutrition policy-making, the responsibilities of the different actors must be made clear at an early stage.

Finally, it is important to watch out for "analysis paralysis".

8.3 Nutrition policy implementation

8.3.1 Sharing experiences

Since nutrition policy-making is a new art, countries have much to learn from each other. It is therefore important to collect information on the state of the art in the different countries and to publicize this information. There is a lot to learn both from similarities and from differences between countries. A recent comparative study of Nordic experiences in nutrition policy-making, commissioned by the Nordic Council of Ministers and so far available only in Scandinavia, demonstrates this point.

8.3.2 Acting opportunistically

In practice, it may be necessary to take the minimalist approach and, while keeping the comprehensive set of actions in mind, to act opportunistically when and where there is a chance. It is important to do something when it is feasible rather than waiting for the total strategy to be completed, as such a construct may never appear. However, it is important when acting to keep the objectives clearly in mind all the time. Continuous evaluation using available information should be part of the actions. Gut feelings may be good indicators since there are so many factors to consider, not least everything which happens in sectors other than nutrition, as well as competing political priorities.

8.3.3 Essential collaboration and cooperation

Between administrators and consumers, a fruitful informal interaction is possible. Pressure groups may sometimes be very helpful. Other important interactors for the administrator are the informed journalist and the informed politician, i.e. individuals with a special interest in the subject of nutrition who may be able and willing to act in their respective capacities when necessary.

Government and marketplace activities should be coordinated as much as possible so as to avoid conflicting health and food sales advice. Cooperation by the government is both possible and useful with industry, as has been repeatedly demonstrated, and may also be with retailers.

8.4 Evaluation of nutrition policy

Various feedback systems are necessary so as to check the effects of policy measures, and can very well consist of simple forms of data collection, such as telephone interviews and postal questionnaire surveys.

To evaluate the effects of a policy it is, as stated above, essential to state from the start what that policy is expected to achieve, i.e. to make its general and specific objectives clear. Some results will of course only be evident after many years. It is important at the outset to make sure that baseline data exist; later may be too late.

It is possible to request governments to carry out health assessments of their various policy options in several areas. This is in essence what nutrition policy is all about.

Annex 1

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