

EUPHA Section on Food and Nutrition

Is an Integrated Food Policy for Europe a Real Possibility?

Some Relevant Issues

Introduction

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Health and well-being is a high priority within overall European Union (EU) policy making. Food production and consumption relate to several of the main determinants of health. Policy instruments exist to address many of these, ranging from “soft” policies (such as in the areas of education, mass communication, special programmes and schemes designed to influence the demand side of the food economy), to harder regulatory policies, agricultural policy, pricing and taxation. However, potential synergies with nutrition exist also with food-related policies such as food safety legislation, trade, public procurement, environment, climate change and agricultural policy. A more integrated food policy is much needed if the EU is to be able effectively to meet a wide diversity of associated challenges, which include, inter alia, chronic diseases, climate change, loss of biodiversity, resource efficiency and food security.

This paper is an “agenda-setting” one, planned in association with a workshop “*Supporting a Healthy Nutrition Policy for Europe*”, held as a pre-conference event associated with the 2013 European Public Health Conference. Firstly it seeks to clarify the scientific basis for any consensus on the changes in public policy needed if food policy is seen as being about maximising the health benefits to be reaped from popularising a healthy diet in Europe. Secondly it seeks to identify the departments of government (both at EU and member state levels), and all other types of other organisations and stakeholders which in any way influence the European diet, and accordingly have to be considered within the context of any integrated European food policy. Thirdly it will also identify potential roles and responsibilities of these stakeholders in the context of integrated food policy, and it will also seek to identify the information requirements for the preparation of such a policy, thus identifying what is known and where are the information gaps; the latter will provide guidance towards a necessary future research agenda. This agenda should undoubtedly include: more information on food choices across the EU, price sensitivity, dietary knowledge (both in populations and in the health professions), effectiveness of nutrition education, potential supplementation of food with essential elements, or use of functional foods, costs to society of nutrition-related diseases and the health gain potential of a healthy diet for all, understanding and effects of food labelling and nutritional claims, effects of advertising and marketing, effects of agricultural subsidies (and potential consequences of their removal), effects of subsidies for environmental protection and incentives for sustainable farming, and increased understanding of the relationships between farming practices and climate change.

This paper consists mainly of a number of “abstract-like” contributions, and although most of these were originally referenced, nearly all the references have been removed, in the interests of easy reading. The paper is designed as a starting point for further discussion; particularly in the section on “Some Possible Research Issues”, readers may well wish to add to the list of suggested research questions.

Some Scientific Considerations

Obesity and calories; sugar, fat and all of that

Professor Philip James, President, International Association for the Study of Obesity, UK

Energy balance with the preservation of weight gain is the longstanding normal condition of homo sapiens. Classically, multiple biological drivers maintain weight in the face of seasonal fluctuations in food and food crises. The regulatory systems are complex and involve a multitude of short, medium and probably long-term signals from the intestine, from absorbed and circulating metabolites as well as hormones and neural pathways. These are linked to controllers of physical activity, to thyroid and reproduction and growth functions, and to neural signals and pleasure centres. Regulatory mechanisms for limiting intake are multiple but not so intense, and have traditionally allowed for the accumulation of energy reserves as a biologically prudent strategy. These evolutionary mechanisms developed when food was exceptionally low in fat content, e.g. 3-10 % energy intake, and predominantly were derived from polyunsaturated (with substantial n-3 fatty acids) fats from plants, supplemented with animal foods, again with little saturated fat. Sugar intakes from fruit amounted to perhaps 2-5% of calories and salt became a precious trading commodity and a form of payment as civilisations began. Salt intakes escalated but fat and sugar intakes remained exceptionally low until the last 2 centuries in Europe and until the last 70 years in the rest of the world.

Now with brilliant mechanisation / computerisation and internet transformations eliminating the need for appreciable physical activity, fat intake above 15-20% of calories passively induces weight gain, as do sugar intakes above about 5%, especially when in drinks. More dietary fat and sugar increase food energy densities, the key to short and medium term consumption. Salt is used by the food industry to induce thirst (for more sugar drinks!), thereby helping to induce weight gain. So post-World War 2 (WW2) industrial developments, which include brilliantly effective free market analyses of intrinsic biological (taste receptors linked to pleasure centres) preferences for fat, sugar and salt (now to new neuro-chemically tested flavours as well) mean that the industrial free market has become incompatible with weight maintenance. *Novel and radical approaches are needed.*

Cardiovascular disease: healthy fats and unhealthy fats

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Cardiovascular disease (CVD) includes heart attacks, angina, heart failure and strokes. A higher blood serum cholesterol level (or its constituent, low density lipoprotein [LDL] cholesterol) is associated with increased risk of CVD through the formation of plaques (atherosclerosis) in the arteries. By contrast, high serum levels of high density lipoprotein [HDL] cholesterol are associated with a reduced risk of CVD. Different dietary fats have different impacts on these cholesterol levels and on other CVD risk factors.

The unhealthy dietary fats include saturated fats and trans fats. *Saturated fats* have been shown to have a dose-response effect on the risk of CVD, by increasing levels of ‘bad’ LDL cholesterol, which lead to atherosclerosis and narrowing of the arteries. Dietary guidelines

have recommended that intakes of saturated fat should be “as low as possible” (European Food Safety Authority), with population goals ranging from less than 10% to less than 7% of dietary energy (European Heart Network). Current intakes of saturated fat in European populations range from approximately 9% to 15% of energy. The main sources of saturated fats are meat and meat products, dairy products, and processed snacks and fast foods. *Industrial Trans Fatty Acids* are artificially made by hydrogenation of vegetable oils, and these increase powerfully CVD risk, by increasing serum LDL cholesterol levels and decreasing those of HDL cholesterol. A small amount of trans fats occurs naturally in ruminant animal foods, such as in dairy products. Each 1% of energy obtained from trans fats is estimated to increase CVD risk by 12%. The WHO recommends an upper limit for trans fats of 1% of dietary energy.

Among the healthy fats, *polyunsaturated fats* reduce serum levels of ‘bad’ LDL cholesterol and raise those of ‘good’ HDL cholesterol. Clinical trials and prospective studies have shown polyunsaturated fats to be the most beneficial replacements for dietary saturated fat in relation to reducing LDL cholesterol levels. They are found in vegetables, nuts and vegetable oils, including rapeseed oil and sunflower oil. *Omega 3 oils and oily fish* as well as omega 6 provide essential oils, and these omega 3 oils are powerful protectors against CVD through mechanisms which include reducing plaque formation and inflammation, and lowering blood pressure. Dietary guidelines recommend the consumption of one to two portions of oily fish per week. Plant sources of omega 3 include soya beans and walnuts. *Plant sterols (and stanols)* substantially lower serum LDL cholesterol levels. Clinical trials have shown that daily consumption of 2-3g of plant sterols reduces blood serum LDL cholesterol by about 10%. This will reduce the risk of coronary heart disease by about 25%. Margarines and yoghurts fortified with such stanols or sterols help to meet the 2-3g per day target level for adults, but plant sterol / stanol goals are not currently included in any national dietary recommendations.

Population based observational studies in Australia, Finland, Poland, Norway, Mauritius and the US have all shown significant reductions in CVD mortality following the introduction of low fat milks and butter / margarine spreads, reformulation of food products, and sometimes fiscal policies which have resulted in a reduction in saturated fat consumption and an increase in unsaturated fat consumption. By contrast, countries and regions with traditionally low intakes of saturated fat, e.g. 3-5%, such as in rural China and Japan, have had low CVD rates, which are now reversing with the transition to ‘Western’ diets, including higher levels of meat and dairy products and of processed snacks and fast foods. Practical recommendations to reduce CVD risk include reducing consumption of meat, dairy, fast-foods and snack foods, and replacing these with fish, nuts, pulses, fruits and vegetables. For cooking, saturated animal fat, hydrogenated fats and palm oils should be replaced by modest amounts only of unsaturated oils such as rapeseed and sunflower oils.

Deficiencies of Vitamins and Trace Minerals and their Prevention

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In 1747, James Lind conducted the first clinical epidemiology study of scurvy among sailors, a scourge greatly affecting naval and maritime activities of the time. Lind's report to the Royal Society is a classic of clarity, and it opened the field of nutritional epidemiology. Other classics followed; among these was the study of the pellagra epidemic in the southern United States before WW1, when Joseph Goldberger of the US Public Health Service investigated the pellagra epidemic, discovering that nutritional deficiency was the cause of it, rather than infections (as was generally thought at the time).

During US mobilization for WW1, a high percentage of draftees from mid-western states were rejected for service owing to goitre. This finding led people at the Cleveland Clinic to lobby for iodisation of salt, based on the experience of Swiss precedents. Morton's "Iodized Salt" famously became the US national standard, while generations of mothers forced reluctant children to take cod liver oil to help their growth. These and many studies from the sciences of nutrition led to a tradition of food fortification as a major public health intervention. President Roosevelt's White House Conference on Nutrition in 1941 led to mandatory fortification of "enriched" flour with iron and vitamin B complex, iodine in salt, and vitamin D in milk, as preparation for war to protect civilian health.

Since WW2, iodisation of salt has become a global phenomenon, although imperfectly so; this has eliminated cretinism and iodine deficiency in many countries, although monitoring of iodisation is still unsatisfactory, even in Europe. In the early 1980s, folic acid (FA) taken before pregnancy was shown by Sir Nicholas Wald and colleagues at the UK Medical Research Council to prevent neural tube birth defects. This led to recommendations that all women within the age of fertility should take daily doses of 400 IU of folic acid, but compliance rarely exceeded 35%. In 1998 the US, Canada and Chile adopted mandatory fortification of flour with FA, and this is now the practice in some 70 countries. Despite overwhelmingly positive evidence, only one or two countries in the European region have done so thus far. The UK Food Standards Agency has recommended this to government but it was side-tracked by unsubstantiated theories of side effects. Vitamin D deficiency is also being seen in many studies, especially in northern climes and among immigrant groups.

In 1986, WHO published a first class review of Guidelines for Fortification of Foods. Initiatives are springing up in some countries, but the public health community in Europe seems to be asleep, and has failed to attach priority to this. Appropriate fortification of foods such as flour, salt and milk, which reach a vast majority of people in high income countries, should be mandatory, and even in low income countries the same principle can apply, where flour, salt and cooking oils reach a large proportion the people. The "silent hunger" of vitamin and mineral deficiencies underlies several factors of poor health, and this calls for strong advocacy by the European public health community.

Food production, the environment, and climate change

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The way in which we produce and consume food is unsustainable. The planet's natural environment is under stress from:

- Greenhouse gas emissions created during the production and distribution of food and from deforestation / land use change; 30% of global GHG emissions are attributable to food systems when land use change is included.
- Land, forestry, fisheries and water degradation.
- Agriculture, including fisheries: the single largest driver of biodiversity loss.
- Pollution, including from nitrate fertilisers.
- Overconsumption and food waste.

Livestock production is a particular hotspot. According to the UN, the livestock sector is one the biggest contributors to the most serious environmental problems we face locally, nationally and internationally. Livestock production is responsible for around 18% of the world's human-induced global greenhouse gas emissions and 30% of the world's biodiversity loss.

The organic food agenda – what are the dietary and environmental benefits?

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The organic market has shown continuous growth throughout Europe, even in times of financial crisis. Consumers are motivated to buy organic food for several reasons, the most significant being firstly the expectation that organic food has a positive effect on health (either because of lack of pesticide residues or because the products themselves are intrinsically healthier), and secondly the expectation that it tastes better. Other aims of organic production systems are to motivate consumers to support the promotion of high standards of animal welfare, the best of environmental practices, increase in biodiversity, and the creation and preservation of balanced landscapes. In food processing, the use of natural substances and natural systems of processing motivates people to buy organic produce. All of these factors, as outlined above, contribute to sustainability. The slogan "With organic you buy seven in one!" summarises these notions; however do they reflect reality?

From a scientific viewpoint it can be stated that there is beginning to be some evidence. It has been shown in different European countries that people who buy organic foods usually have a healthier diet overall. Epidemiological research is rather scant, but what there is provides evidence of reduced incidence of allergies among children eating organic dairy produce, and intervention studies on animals have shown increased resilience and phenotypic flexibility among those on organic foodstuffs. Yet the research budget for these topics is very limited, and it needs to be increased to enable adequate evaluation of the healthiness outcomes of organic foods as compared to the expectations placed on them.

Concerning environmental and related issues, the principal aims of organic production systems are to maintain the naturally available resistance of plants and animals (and accordingly to avoid use of pesticides and antibiotics), which can be achieved by avoiding too much speeding up of their growth. This approach saves the environment from much of the polluting and disturbing effects of nitrogen from fertilisers, from pesticide residues, and

from antibiotic resistant bacteria. Nevertheless, such production systems can still be improved at many points, e.g. by the development and dissemination of best practices, and by improving both processing technologies and communication with consumers. All of this would also contribute to the setting of a necessary future agenda.

Some Possible Research Issues

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Partly based upon the excellent PHEIAC evaluation report: “*Evaluation of the implementation of the Strategy for Europe on Nutrition, Overweight and Obesity related health issues, FINAL REPORT submitted by “Public Health Evaluation and Impact Assessment Consortium” (PHEIAC), including: Economisti Associati srl , The Evaluation Partnership (Lead Partner for the Assignment) 2013*”, what follows is a concise yet comprehensive framework posing a series of *possible research questions*.

Overall Context: In 2007, the European Commission (EC) published the Strategy for Europe on Nutrition, Overweight and Obesity related health issues (“the Strategy”), providing an integrated framework for action intended to contribute to reducing ill health due to poor nutrition, overweight and obesity in the EU. Different levels of action [i.e. local, regional, national, European and international] were envisaged, and the Strategy advocates a partnership approach, encouraging action by four main groups of actors: the EU itself, Member States (MS), private organisations, and international bodies such as WHO.

The Evaluation: In 2012, the EC commissioned an independent external evaluation of the implementation of the Strategy. The aim of the evaluation was to assess both the implementation process and its impact. The scope of the evaluation included initiatives / actions developed and implemented between 2007 and 2011.

The evaluation approach was built on three distinct pillars (or task packages):

1. Evaluation according to (groups of) instruments: The main focus of the evaluation was on assessing the implementation and, to the extent possible, the results of the individual key initiatives and instruments that had been developed. The scope of the exercise was defined by the 17 evaluation questions, which were divided into six thematic areas.
2. Case studies according to desired outcomes: three case studies were conducted. Each case study focused on a specific desired outcome.
3. An in-depth review and assessment of available statistical sources concerning obesity and overweight and other Nutrition, Obesity, and Physical Activity (NOPA) related issues was undertaken, in order to provide an indication of whether progress is being made in line with the global objectives of the Strategy. Primary data for the evaluation was generated by engaging a total of nearly 200 relevant stakeholders and key informants through interviews and focus groups.

Level of action: At European level, the EU has developed and implemented *legislation* in some of the key areas identified as priorities in the Strategy. These mostly concern the *labelling and marketing* of food and related projects, and are in part aimed at improving the provision of nutrition information to consumers. In addition, to support goals as diverse as strengthening the evidence base for policy-making and making healthy foods more available to specific target groups, the EC has funded a variety of programmes and transnational projects. The EC has also set up numerous fora to facilitate engagement among other

stakeholders. Through the Platform, it brings the private and voluntary sectors together, where it is then their responsibility to agree and to adhere to commitments intended to address specific aspects of overweight and obesity-related health issues. In order to encourage action among the MS, the EC established the High Level Group (HLG), which fosters peer learning, the sharing of best practices and the negotiation and agreement of common initiatives. The MS also address the Strategy's key areas with their own policies and initiatives, though the level of action varies considerably according to the issue and country in question.

Overall effectiveness / impact: Both by taking action itself and by engaging with other relevant actors, the EU has contributed to addressing several key determinants of NOPA issues. Thus, progress has been made (albeit to a varying extent) towards all of the objectives defined in the Strategy. However, partly due to the *'soft' competence* and limited resources available to the EU, major changes (at least not when seen in relation to the scale of the problem) have not been achieved, as the levels of overweight and obesity continue to be high across the EU). The relatively soft nature of action taken at most levels so far has relied primarily on information provision and education, limited interventions in specific environments (such as schools), and voluntary actions by the food industry and other private actors. There are many who argue that more intrusive measures, in particular stricter regulation and/or fiscal measures, would be more effective in combating NOPA issues, and there is some evidence to suggest this may indeed be the case. However, since there is a *lack of consensus* among MS (who have primary responsibility for this area) on the desirability of such measures, it would have been unrealistic to expect the EU to work actively to encourage them.

However, the evaluation results also show there is a real risk that, without a new impetus, interest in continuing to deal with NOPA issues may fade, at least at EU level. The gains made since the adoption of the Strategy were at least partly due to the EC's willingness to innovate, to develop ideas and to test new initiatives. As these become more established, enthusiasm for them is beginning to wear off, as evidenced by a certain tendency towards *inertia* in both the HLG and the Platform. More generally, the economic crisis has profoundly altered the policy landscape since the Strategy was adopted in 2007. This has also resulted in increasing inequalities of health: socio-economically disadvantaged groups are more likely to have unhealthy diets and to be physically inactive.

Recommendations: The EU should build on the progress made since the adoption of the Strategy in 2007. It should continue to play an active role and facilitate an integrated and holistic approach to policy. Within the areas of its competence, it should continue both to pursue actions itself and to seek to engage and build partnerships with other stakeholders, including MS and the private sector. However, substantial efforts are needed to re-focus efforts and re-energise collaboration, and there needs to be careful consideration of the effects of economic austerity on lower socio-economic groups, including to ensure that initiatives do not further exacerbate health inequalities.

Research Questions

- 1. If "substantial efforts are needed to re-focus efforts and re-energise collaboration", how might these best be stimulated?*
- 2. Can policy makers be encouraged to list topics and then prioritise them?*
- 3. How well do policy makers and planners understand the "effectiveness hierarchy" concept, that "upstream" policy interventions are generally more powerful and effective than "downstream" interventions focussed on individuals?*

4. *What are the biggest barriers to implementing effective policy interventions - vested interests, or lack of political will?*
5. *Which interventions might narrow inequalities, which might worsen them?*

Member State activities and the High Level Group: The *HLG* has brought together senior officials from the MS on a regular basis, encouraging them to learn from each other, to cultivate working relationships, to pursue joint initiatives and to keep abreast of important EU policy developments. The *Salt Reduction Framework*, a voluntary initiative jointly agreed by all HLG members, is the best example of the HLG's potential to make a real impact. The progress made with the Framework demonstrates the HLG provides an ideal forum for promulgating effective policy ideas among EU MS, galvanising political will and reaching workable compromises. The continued attention to the issue and regular reporting have ensured that, at least in some countries, the initiative has led to real change (though impact evidence is scarce) and even opened the door to types of intervention, such as voluntary agreements with industry, that were not previously considered. However, following the success of the Salt Reduction Framework, the HLG appears to be witnessing an unintended, gradual de-prioritisation on both sides and diminishing relevance.

Recommendations: The EC should strive to re-establish the HLG as a unique forum where key discussions and debates are held and where important information is exchanged. Ways to do this might include:

- Re-launch the objectives and strategic direction of the HLG.
- Define new topics for future joint agreements, striking a balance between a high level of ambition and reasonable chances of success.
- Demonstrate to members that the HLG is high on the EC's list of priorities by enlisting senior officials to chair meetings and, where possible, invite guest speakers that members are unlikely to encounter in other fora.

Research Question

6. *What objectives are feasible through regulatory approaches compared with partnership approaches?*

EU Platform for Action on Diet, Physical Activity and Health: Since its launch in 2005, the EU Platform for Action on Diet, Physical Activity and Health has provided a common forum for exchange between private and civil society actors from different sectors and the EC, and has contributed to enhancing dialogue and mutual understanding between them. The Platform has also contributed to generating a significant level of action, embodied in the more than 300 voluntary commitments made by its members. The main problem facing the Platform is the difficulty of assessing the relevance, proportionality and impact of these actions. The reasons for this include the lack of comparability between individual commitments, and the fact that the Platform has no common (quantitative) targets, and no effective mechanism for assessing commitments, their objectives and outcomes, let alone their ultimate health impacts. A number of recent developments within the Platform (inter alia the renewed objectives agreed in 2011) have been positive, but not sufficient to significantly alter this situation. Thus, the fundamental problem remains that, although the Platform has successfully engaged key stakeholders, improved the dialogue between them and generated a significant amount of action, it has *largely failed to achieve the other key objective* set in its founding charter, namely that "over time better evidence is assembled of what works, and Best Practice more clearly defined." This lack of evidence, and of an

objective and widely accepted mechanism to judge the merit of commitments, had led to some disenchantment.

Recommendations: The Platform should focus on making progress towards generating better evidence. To achieve this, thought needs to be given to how the relevance, proportionality and/or impact of commitments can be assessed more comprehensively and systematically. Ways in which this could potentially be done include:

- Pre-screening of commitments by an independent panel.
- Periodic analytical (rather than purely descriptive) reviews of commitments by activity area.
- The commissioning of targeted scientific research and/or evaluative studies.

Research Question

7. If partnership approaches are evidently NOT effective, why do public health advocates remain involved?

EU legislation: Three pieces of EU legislation are clearly relevant to the Strategy's specific objective of 'better informed consumers'. The *Nutrition and Health Claims Regulation* (adopted in 2006) and the *Food Information Regulation* (adopted in 2011) have the potential to enable consumers to make healthier food choices by making more information relevant to health and diet available. For example, the Nutrition and Health Claims Regulation harmonises the criteria which products have to fulfil in order to be allowed to carry nutrition claims such as "energy-reduced", "saturated fat free" or "(very) low sodium/salt". The Food Information Regulation makes labelling for energy and six key nutrients mandatory, sets rules for legibility, and allows for additional forms of representation (such as colour coded systems) on a voluntary basis as long as certain criteria are met. While these are clearly steps in the right direction in terms of enabling consumers to be better informed and avoiding misleading information, it would be wrong to classify them as ground-breaking developments in the fight against NOPA health problems. There are a number of concerns and/or *shortcomings* that are likely to limit the ultimate health impact of both Regulations. The fact that the Food Information Regulation *does NOT mandate any form of front-of-pack nutrition declaration* is disappointing considering the large body of evidence demonstrating the much higher effectiveness of front-of-pack labelling for most consumers. Also, the *lack of common nutrient profiles* (which are supposed to be one of the central elements of the Nutrition and Health Claims Regulation) continues to be a considerable source of frustration, both among industry actors and health and consumer organisations. The *Audiovisual Media Services Directive (adopted in 2007)* includes an article that calls on MS and the EC to encourage self-regulation by media service providers to limit advertising of 'unhealthy' foods and beverages to children. This has contributed to limiting such advertising, in so far as it was one of several factors that led to the development of *self-regulatory* approaches in many MS, although the codes that were adopted (or revised) are not strict or clear enough to have a significant impact on actual advertising practices.

Recommendations: The EC should consider further steps to address the shortcomings of the EU legislation adopted in recent years (when compared with the optimal outcomes from a health perspective). This should include:

- Working towards the widespread and consistent implementation (on a voluntary basis) of front-of-pack energy and nutrient labelling.
- Making a concerted effort to agree and implement the nutrient profiles as foreseen in the Nutrition and Health Claims Regulation.

- Continuing to monitor self-regulation (as well as regulation) of food marketing to children in the MS, with a view to highlighting differences in approaches.
- Implementation and its real effects on advertising practices and exposure.

Research Questions

8. *How much might mandatory front of pack labelling reduce consumption of salt, sugar or saturated fats?*
9. *What tactics did vested interests use to successfully sabotage the 2011 food information regulations?*
10. *What are the most effective policy interventions to control, restrict or ban marketing of junk food and SSBs??*

Integration of NOPA dimension in other EU policies: In accordance with the ‘Health in all Policies’ principle, DG SANCO aims to ensure an adequate contribution of relevant EU policies to the objectives in the NOPA field. The integration of NOPA concerns in other EU policies has been quite successful in some policy areas, including (parts of) the EU’s agricultural, research, media, sport, consumer protection, and health statistics programmes. On the other hand, there has been little or no inter-service cooperation in a number of other policy spheres, including transport, employment and regional policy. By and large, DG SANCO has successfully integrated NOPA concerns into EU policies where the implications were relatively clear. However, partly due to capacity constraints, it has found it more difficult to mainstream the NOPA dimension into other, potentially much broader policies, where its relevance is typically less obvious.

Recommendations: To implement the Health in All Policies approach more fully, DG SANCO should attempt to engage more with the EC services responsible for a range of EU policies for which the NOPA implications tend to be less obvious, but can potentially be very significant. Relevant policy areas that should be prioritised include:

- Regional policy, in particular the structural funds.
- Environmental policy, in particular in the context of the work towards a possible *EU ‘Sustainable Food Strategy’*.
- Health and safety at work; and urban transport / mobility.

EU funding and programmes: Between 2007 and 2011, the *EC* invested €304.2 million to co-fund 98 projects that are relevant to the Strategy through the *Seventh Framework Programme for Research* (which provided the lion’s share of the funding), the Health Programme and the Preparatory Actions in the field of sport. Such projects can make a significant contribution to strengthening the evidence base for policy-making, and in some cases have also had a tangible positive impact on other relevant objectives.

The *EU School Fruit Scheme* was essential to the extension of existing or creation of new programmes in 24 MS. In the school year 2010/11, the EU Scheme contributed to the distribution of an average of 35 portions of fruit and vegetables to over 8 million school children. The scheme had a positive impact on children’s fruit and vegetables consumption in the short term. Although it was too early to measure any longer-term impacts, there is a body of scientific evidence suggesting that fruit and vegetable schemes can have long term impacts on consumption, provided that their design (including frequency and type of produce distributed, accompanying educational measures, etc.) is in line with the respective education systems and food cultures.

The Most Deprived Programme has contributed to feeding millions of needy people across Europe. But given that nearly all of the food distributed consisted of basic foodstuffs like

cereal based products (pasta, rice, flour) and dairy products (milk, skim milk powder, butter and cheese), while the amount of fresh fruit and vegetables was negligible, it is very unlikely that the Programme had a significant beneficial effect on the nutritional behaviour of beneficiaries during the period under evaluation (2007-2011). However, nutritional considerations have begun to play a more important role from 2012 onwards (with the new regulation), and there are indications that this will continue to be the case in a future revised programme.

Recommendations: EU co-funding for schemes and programmes to pursue NOPA-related objectives have been effective and should be continued. In particular:

1. So as to maximise their relevance and policy impact, funding decisions for transnational projects should emphasise the dissemination strategy, policy implications, and sustainability of projects.
2. With three funding options for NOPA-related projects available in the programming period 2014-2020, the EC services concerned (DG RTD, DG SANCO and DG EAC) should co-ordinate in order to minimise overlaps. The EC should carefully consider the recommendations made by the external evaluations of the EU School Fruit Scheme and of the School Milk Scheme (once it becomes available), in particular to provide more guidance for effective accompanying measures and more consistent and comparable evaluations of national and regional schemes.

Research Question

- 11. What are the mid-term and long term benefits of the EU School Fruit Scheme? Are they cost effective?***

Agricultural policy: The Strategy for Europe on Nutrition, Overweight and Obesity had surprisingly little to say about the effects of agricultural policy on NOPA issues, and this matter was not referred to at all in the PHEIAC Report. This is surprising, as what Europeans eat is influenced considerably by what European farmers produce, and what they produce reflects the products which have attracted the most substantial agricultural subsidies over the last five decades. These subsidies have encouraged in particular production of saturated fat-rich foods (e.g. beef and dairy products), with little encouragement to production of healthier agricultural produce. This alone must have contributed to the European experience of NOPA-related health problems.

Recommendations: Over a period of 10-20 years, agricultural subsidies should be moved away from support to saturated fat-rich and other unhealthy products, and used to promote agricultural production of pulses, fruit and vegetables, and of more cereals for human consumption.

Research Questions

- 12. What would be the effects on farms and the European farming industry of substantial reduction in livestock farming accompanied with substantial increase in the farming of plant crops?***
- 13. What would be the longer term changes in food consumption consequential of such alterations of production and price in favour of healthier nutrition?***
- 14. What, as a result of long term altered patterns of food consumption, would be the outcomes for human physiology, biochemistry, and morbidity and mortality from NOPA-related diseases?***

Monitoring system / evidence base: The NOPA database, a project jointly funded by the EC and WHO Europe, collects and catalogues surveillance data and information on national policies and actions from across the EU, and publicises the findings. Some of the obstacles to the success of the project, mostly related to surveillance data, are beyond WHO Europe and the EC's control, as the database depends on the timeliness and comparability of data collected by a range of actors. Examination of this data reveals persistent methodological inconsistencies that render comparison between countries difficult. This is especially true for trend data which would be extremely useful in determining the relative success of different policy approaches. Concerning issues over which the project exercises more control, it has made considerable achievements. WHO Europe has collected an enormous amount of information on each country's policies and actions, and made some of this, particularly actual policy documents, publicly available through the NOPA database and a series of publications. Although there are concerns about parts of the database going out of date, this represents a major achievement and can make a significant contribution to policy development in the EU. However, there have been inter-related shortcomings in organising and disseminating the massive amount of information at WHO Europe's disposal. The current version of the NOPA database accessible to the public does not make available any surveillance data. The policy information displayed is mostly limited to the existence of policies and basic facts about them (rather than the detailed information on implementation and evaluation that has also been collected).

Recommendations: With a view towards the next phase of the project, the EC and WHO Europe should increase the focus on the NOPA database's user-friendliness and dissemination of information. In particular, this could entail:

- Publishing the surveillance data collected so as to facilitate comparison between countries.
- Increasing the functionality of the NOPA database website so that stakeholders can find information on the implementation and evaluation of policies.
- Communicating information about the NOPA database to a wider audience.

Taking a broader view, this evaluation has highlighted many times that the current provision of surveillance and evaluation data in the EU as a whole is far from adequate. Without such data it is difficult to make statements about current trends with confidence, or to assess the effectiveness of policies meant to address overweight and obesity. The EC, along with WHO Europe, should work to encourage relevant actors in the MS to collect better data at regular intervals, to promote the awareness and adoption of common standards and methodologies, such as those already developed for the EHIS and Global Physical Activity Questionnaire, and to ensure that results are published and disseminated widely.

Research Questions

- 15. How best to assess the effectiveness and cost-effectiveness of nutrition policies?***
- 16. Does the "4Ps marketing mix" (product, place, price, promotion) offer a useful policy analytical framework?***
- 17. What are the biggest barriers, and biggest potential facilitators to implementing effective healthy food policies in Europe?***

Some Policy Considerations

Agricultural Policy

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In the developed world, including in Europe, farming has been subsidised for at least most of the last century. In Europe (and in North America) farmers have received cash incentives to produce certain products, and price support mechanisms have also been used to guarantee farmers further reward when their products are marketed. In Europe, since the 1950s, farm subsidies have in particular favoured beef, milk, cereals, and sugar, these subsidies having been justified originally as a response to starvation in much of Europe in the late 1940s. Accordingly, farmers have produced quantities of these products often in excess of the amount that can be sold (resulting in “beef mountains”, “milk lakes”, etc.). It is not by accident that burger bars have proliferated on every high street, as outlets for sale of cheap low quality beef, or that supermarkets are filled with so many forms of cheap manufactured derivatives of milk products, both with high saturated fat content; beef and dairy produce are the main sources of the excess of saturated fat in European diets. Meanwhile, fruit and vegetables are in relatively short supply, never having been subsidised, but are comparatively expensive in the shops as price support has been used to provide some degree of guarantee to producers.

This explains how it is that the choice of foods available for us to purchase is influenced considerably by the nature of the output of farming, as determined by subsidy arrangements. We should not blame farmers for this situation; indeed, there is a strong case for subsidy support to rural economies, as “payment” for protection of the rural environment, for responsible animal husbandry, and for maintenance of adequate food safety requirements. So agricultural policy needs to plan a move of farm subsidies away from support to unhealthy production (beef and dairy), and towards healthier products (such as fruit and vegetables). In this way, the choice of food products as sold to the public would be altered, in favour of more and cheaper fruit and vegetables (if price support were to be removed as producer support subsidy is provided instead), with grass-fed beef becoming an expensive luxury food (though of much higher quality than at present), and milk products similarly being sold as according to normal market conditions, without subsidy. This might even favour an increase in consumption of soy milk, an unsubsidised but healthier alternative to cows` milk, which contains no trans fats, very little saturated fat, but a fat content which is made up largely of the to be preferred unsaturated fats.

Policies for fish production

Sue Dibb, Coordinator, Eating Better: for a fair, green, healthy future, UK

Fish is an important source of protein and nutrients. Over three quarters of the world’s fish stocks are currently either fully or over exploited. NGO campaigns are encouraging food companies and consumers to source and consume fish from sustainable sources.

The European Common Fisheries Policy (CFP) is under review. Much attention has focused on discards - the absurdity of 50% of all fish caught in Europe being thrown back into the sea dead. Other problems include “bycatch” of endangered species such as sharks, marine

mammals and seabirds, and damage to marine environments from fishing gear, such as bottom trawling, and lack of management to control fishing in sensitive areas.

Sustainable aquaculture (fish farming) may provide a solution for the future if environmental and social challenges can be managed.

Reconciliation of food production and the environmental agenda

Sue Dibb, Coordinator, Eating Better: for a fair, green, healthy future, UK

Many of today's food production systems compromise the capacity of the Earth to produce food in the future. Globally, and in many regions including Europe, food production is exceeding environmental limits, or is very close to doing so.

Policy makers are starting to focus attention onto the challenge of feeding a growing and more affluent global population (of 9 billion by 2050) healthily and equitably, while halting the devastating environmental impacts from our current food and farming systems.

One solution currently receiving policy attention from scientists, politicians and agri-business is 'sustainable intensification' – the concept of producing more food while also reducing its environmental impact. Its proponents argue that food production must increase by around 50%. Others challenge this productionist approach, pointing out that we already produce more than enough food to feed everyone – thus reducing food waste and changing consumption patterns, including reducing both over-consumption generally and meat and dairy consumption in particular, are important policy goals that have received less attention than have production-focussed policies.

The EC is assessing how best to limit waste throughout the food supply chain, and is considering ways to lower the environmental impact of food production and consumption patterns, via a Communication on Sustainable Food, due in 2013.

Retailing and marketing of food

Dr Tim Lobstein, Director of Policy and Programmes, International Association for Study of Obesity, UK

The food choices made by an individual are determined by many factors, including those brought by the individual to the moment of choice (culture, personal taste, knowledge, skills), and those brought by the producer and seller of the food (quality, appearance, packaging and labelling, price, display position and promotional messaging). The budgets being spent by companies in their marketing efforts are a considerable proportion of their turnover, with the focus of their marketing being put on foods that are not recommended for healthy diets. This undermines the companies' frequently expressed claims that they 'only sell what people want', and it also undermines their assertion that they 'are part of the solution' to improving dietary health.

For more than 20 years, campaigns by consumer and health organisations have highlighted the various marketing strategies being used by companies to encourage children's

consumption of fatty and sugary foods. In recent years the range of media available to marketing companies has widened considerably, especially through low-cost digital “advergaming” and the use of social media. These techniques give direct access to children and effectively bypass the opportunities for parents to exert some sort of control over the commercial messages to which their children are exposed.

What is now needed is wider understanding of the increasing concerns in international health policy arenas about marketing of fatty and sugary foods to children, expressed by the World Health Assembly resolution on the issue. It is also noteworthy that pre-emptive actions are being taken by food companies to protect their marketing activities from government intervention. Key findings from recent research on the types of policy needed to control marketing to children, and the gaps in the evidence requiring further research to support policy-making, will be reported towards the end of 2013.

Legislation: taxation and subsidies to promote healthy nutrition

Dr Oliver Mytton, Academic Clinical Fellow, University of Oxford, UK

Taxation has often been a key part of alcohol and tobacco control. Its role in relation to food and diet has been more controversial. Experimental and modelling studies showed potential for such measures to change consumption and improve health. In recent years European austerity has created the opportunity to introduce new taxes on unhealthy food to improve health. In the past two years Hungary (junk food), France (sodas), and Denmark (saturated fat) have all introduced such taxes. Much can be learnt from these countries. The emerging picture suggests all these taxes have had the intended consequence of reducing consumption of the taxed food item. Understanding the impacts on health may be more complex. Modelling studies suggest a need to consider not only the taxed item but what replaces the tax items in the diet, if we are to understand the net effect on health. The other key question is what to tax? Greatest consensus exists for taxes on sugar-sweetened drinks, but this may be too narrow a category for a greater impact on health. Winning the political and public battle remains a challenge. It is noteworthy that the Hungarian and French taxes appear to be successful, whereas the Danish tax was abolished last year. Subsidies on healthy foods, whilst preferred by the public, appear for now unlikely, due to austerity. There is also a concern that subsidies may promote purchasing of more food overall, and so of more calories. The extent to which that might lead to increased energy intake, and the net effect on health, both require further exploration.

Educational strategies for better food, nutrition & cooking literacy

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Dietary habits become established in early childhood, and from then both health status and dietary behaviour tend to continue into adulthood. Any early prevention effort that promotes healthy eating patterns amongst children is therefore important. Since habits, formation of lifeskills, and food and nutrition literacy are shaped by the educational

environments that surround young people, it follows that educational and learning strategies designed to promote healthier eating, targeted at young people, should be an important part of any European integrated food policy.

Such strategies for education and learning about food, nutrition and cooking should be developed so that they may target relevant aspects and components of the life-courses of children and young people. In other words, strategies should be directed towards the relevant educational settings that children and young people attend, such as kindergartens, primary and secondary schools, as well as vocational schools and higher education.

Strategies addressing learning and education about food, nutrition and cooking enjoy a high level of support in the population. Recent European projects (including both Porgrow¹ and Obesity Governance²) have shown that, among a broad range of stakeholders, strategies for counteracting diet-related obesity, by addressing the educational environments of young people, are ranked as of high importance. “Schools” should therefore play a more active role in the shaping of skills, knowledge and competences in relation to food, nutrition and cooking.

Basic understanding and knowledge of nutrition is something that everyone should have, and general basic education on nutrition is much needed. However, basic nutrition knowledge is obviously not adequate for professional cooks, who should have greater understanding of basic public health principles, nutritional quality, and of how different ingredients and cooking methods may modify nutritional quality of meals. Food service managers who plan menus, and who are responsible for food procurement, require public health knowledge even in greater depth, because they are responsible for the health of other people, and for influencing their food habits. Nutrition education should follow these fundamental requirements: basic education should start in kindergartens and continue through all schools, and cooks and others working in food services and in restaurants should know more about healthy nutrition than do their customers; those responsible for maintenance of the good health of others should be expected to have undergone some higher education in nutrition.

Food Governance and the Political Economy

Monika Kosinska , General Secretary, European Public Health Alliance, Belgium

The governance and policy-setting within our food system is incoherent and no longer fit for purpose. Often a mismatch of competing policy objectives – rural development, intensive food production, farming subsidies, food support, trade objectives to mention but a few – healthy nutrition has arguably become both a tool and a victim of a flawed economic governance that is creating havoc for our food systems, diets, health and environment.

Food and agricultural produce have been the staple of trade and commerce for millennia; nations were built and empires sustained on their ability to store sufficient grain, to control important production or supply chains, and to ensure food security. Agricultural policies following the second world war continued governmental intervention; however, coupled

¹ <http://www.sussex.ac.uk/spru/research/kplib/archives/porgrow>

² <http://www.sifo.no/obesity-governance/>

with significant public investment into food and agricultural research, these have led to an unprecedented level of food output, where supply has ensured a 40% increase in calorie intake per person for a population of 7 billion rather than for the 2.5 billion, as it was 65 years ago.

Despite phenomenal yields, the organisation of our food system has failed to deliver good governance. For some of our global population – 1 billion of us - the food revolution has in part resulted in overweight and the associated conditions such as ‘diabesity’ and a rise in chronic diseases. For others within our global population – another 1 billion of us – the food revolution has done nothing to alleviate chronic hunger or food insecurity.

Moreover, even in our richest, most ‘food abundant’ economies, there are millions who are dependent on food interventions. ‘Food stamps’ in the United States (US), the ‘Most Deprived Scheme’ in Europe, as well as food banks and social interventions at national level, have been necessary to cushion the effects of poverty on individual food insecurity. Few of these systems address the nutritional requirements of populations receiving ‘food aid’. The dichotomy of a political economy that on the one hand oversees a huge shift of produce in ‘added value’ global supply chains, but which is unable to deliver decent economic outcomes for large proportions of people living in the wealthiest parts of our global economy, is glaring.

As we move into discussions on a new food policy for Europe, pulling the ends of the dichotomy together will be essential: an economic model that is driving and incentivising the ‘adding of value’ into our food production systems, that is developing new and ‘novel’ food products in order to ensure ‘global competitiveness’ for the European economy, and yet is failing to provide a stable, nutritious and affordable diet for people living within its borders, is unsustainable. A model in which the promotion of unhealthy products is seen as economically more desirable than assuring affordable and accessible good food is irresponsible. An economic model that fosters a food production system and a culture of food commercialisation which fosters inequalities, which is environmentally damaging, and delivers poor health outcomes, is in desperate need of fundamental reform.

For too long, public health has tinkered along the edges of economics, assuming that by framing public health evidence into economic terms and arguments we would succeed in bringing about change. This has failed. Public health must tackle the political economy, not just the economics of food, addressing the interplay between economics, law and politics, and how our institutions have developed to perpetuate the economic ideologies and assumptions that have created our food dichotomy. Ultimately our goal must be to shift 65 years of economic thinking, within which produce has been but the cheapest input into an industrialised food system, towards a food system where the governance supports the ultimate goal of nutritious and affordable produce, to be available on all of our tables.