Reformulating food products for health: context and key issues for moving forward in Europe

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TABLE OF CONTENTS

1. INTRODUCTION 3

2. THE CURRENT SITUATION 4

2.1 RANGE OF REFORMULATION ACTIVITIES BUT REMAINING TENSIONS AND KNOWLEDGE GAPS 4
2.2 FOCUS ON SALT 4
2.3 SOME ACTIVITY ON PORTION SIZE 5
2.4 SEVERAL NEW EUROPEAN DEVELOPMENTS 5
2.5 INCREASING INTERNATIONAL ACTION 6

3. LESSONS FROM SALT REDUCTION STRATEGIES 7

3.1 DEVELOPING THE STRATEGY 7
3.2 WORKING WITH THE FOOD INDUSTRY 7
3.3 RAISING CONSUMER AWARENESS AND LABELING: 7

4. KEY TECHNICAL ISSUES IN REFORMULATING FAT AND SUGAR CONTENT 9

4.1 OVERVIEW 9
4.2 TECHNOLOGICAL ISSUES 10
4.2.1 There are different technological approaches to reducing fat and sugar 10
4.2.2 Reformulation has implications for food structure and safety 10
4.2.3 A single nutrient or a whole product approach can be taken 11
4.2.4 Companies could compete or collaborate on technological know-how 11
4.3. CONSUMER ISSUES 12
4.3.1 Consumers may not accept reformulated products 12
4.3.2 Reformulated products can be introduced by "stealth" or by marketing the change 12
4.4 COST ISSUES 13
4.4.1 Reformulation introduces costs to industry 13
4.4.2 There are costs to governments of developing reformulation strategies 13
4.5 POLICY ISSUES 14
4.5.1 Government standards on food composition may affect the potential to reformulate foods 14
4.5.2 The presence of existing nutrient criteria areas may affect the incentives for industry to reformulate foods 14

5. POSSIBLE OPPORTUNITIES FOR ACTION 15

5.1 EU TEMPLATE FOR ACTION ON REFORMULATION OF FAT AND SUGAR 15
5.2 DATA 15
5.2.1 Data on food intakes and composition of foods 15
5.2.2 Modelling the impact of changes in the food supply on health 15
5.3 BENCHMARKS AND MAJOR FOOD CATEGORIES TO FOCUS ACTION ON 15
5.3.1 Standard levels for different nutrients in key products and meals 15
5.3.2 Building on existing legislation 15
5.3.3 Guidance on standard portion size 16
5.4 REFORMULATION 16
5.4.1 Where to focus 16
5.4.2 Developing initiatives of the restaurant and catering sector 16
5.5 RAISING CONSUMER AWARENESS 16
5.5.1 Consumer education campaigns 16

5.5.2 Changing the balance of marketing *16*
5.5.3 Front of pack labeling *16*
5.6 MONITORING AND EVALUATION 17
5.6.1 European database to monitor composition of foods *17*
5.6.2 Monitoring changes in the composition of meals eaten outside of the home *17*
6. RELEVANT RESOURCES FOR MOVING FORWARDS 17
6.1 FSA CONSULTATION ON SATURATED FAT AND ENERGY BALANCE 17
6.2 TECHNICAL SUPPORT AND ADVICE 17
6.3 FOOD PRO-FIT 17
REFERENCES 19
ANNEX 1 22
Full list of the quantitative outputs of commitments on reformulation and portion size from working paper (April 2009) *22*

1. Introduction

The EU Platform on Diet, Physical Activity and Health[1] was established in March 2005 by DG Sanco to bring together key stakeholders to discuss and report on commitments on nutrition and physical activity. One of its foci was product reformulation. In May 2007, in line with WHO recommendations,[2] DG Sanco published its EU Strategy on Nutrition Overweight and Obesity.[3] The Strategy highlighted its intention to facilitate increased food reformulation activity across Europe.

Since that time, reformulation activity has increased in Europe by both governments and the industry. Industry commitments in this area were reviewed by the third monitoring report of the EU Platform (2008) which highlighted the need for better reporting in terms of reductions being made.[4] A Working Paper on Product Reformulation and Portion Size prepared for DG Sanco in 2009 also found that a long list of initiatives are in place, but it is difficult to get a clear picture of the extent of the action or assess the likely impact on health.[5]

The focus of reformulation by the European Commission (EC) itself has been on salt. In 2008, DG Sanco compiled the available information on salt reduction activities in Europe.[6] This provided the basis of the EU Framework for National Salt Reduction Initiatives published in 2008.[7] The framework intended to support and reinforce national plans, enable comparison of progress, ensure coordinated messages are communicated to the food industry, and help to generate momentum and measurable action on salt throughout Europe. But it did not intend to distract from efforts to improve product composition in other ways, such as reducing the content of total fat, saturated fatty acids, trans-fatty acids or sugars or reducing energy density or portion size.

In this context, this paper aims to provide the background and identify the key issues in relation to fat and sugar reformulation relevant to further coordinated action in Europe. The paper takes stock of the current situation, identifies the lessons learned from previous reformulation activities (especially on salt), describes the key technical related to fat and sugar reformulation, and highlights possible opportunities and priorities for action.[i] It is intended that the paper be supplemented by views and experiences of Member States to inform deliberations on moving forward.

The information on which this report is based was obtained by scanning the available published literature; reviewing information from recent seminars;[10,11] collating information on lessons learnt from previous and ongoing reformation activities; and reviewing government websites and reports. The author has also drawn on experience from previous work for the UK Food Standards Agency and the Dutch Food and Consumer Products Authority, as well as in her current position managing the Australian Division of World Action on Salt and Health.

[i] It will not consider the health benefits of reformulation as this issue has already been addressed elsewhere.[8,9]

2. The Current Situation

2.1 Range of reformulation activities but remaining tensions and knowledge gaps

There are now many initiatives underway to reformulate foods in the EU, led by industry and governments. [12,13] Initiatives include programs to reduce salt, saturated fats, trans fats or sugars, portion size and multi-faceted projects. These current initiatives are characterised by:

- A range of reformulation activity, but scope for more action to capture the growing market for health
- A dominant focus on salt in some countries and trans fats in others
- Increased industry action where it is encouraged or mandated by government policy
- No consistency of the levels of nutrients (salt, fat, sugar) and portion sizes in different countries e.g. a particular product brand might have a higher level of salt in one country than another
- A series of tensions about how best to move forward, including the single nutrient versus whole food approach, strategies based on encouraging competition between the food companies versus collaborative industry action, and the advantages of using the potential health benefits of reformulation as a marketing strategy versus making changes by "stealth."
- Lack of information about how product reformulation is influenced by other policies e.g. labeling, nutrient standards, health claims, compositional standards
- Absence of adequate data to demonstrate how product reformulation affects food composition at a population level, as well as dietary intakes, and health

2.2 Focus on salt

Until recently, most of the reformulation initiatives have tended to focus on trans-fats and/or salt. Salt reduction strategies are now being implemented in a number of countries, both in Europe and elsewhere,[14] and take on a number of different forms with some strategies led by government (e.g. UK, Ireland, France, Finland, Argentina, Brazil), some by industry (Netherlands) and others by NGOs (e.g. Poland, Slovakia, Australia, New Zealand). Some strategies are focused on a particular food (e.g. bread in France, Iceland and New Zealand) whilst others are simply about raising consumer awareness (e.g. Iran).

Despite the wide range of initiatives in place, only the UK[15] and Finland[6] have a clearly documented impact on population salt intakes. Finland commenced work to reduce salt in 1975 and by 2002 had demonstrated a 3 gram reduction in average population salt intakes from (from 12 to 9 grams per person per day).[53] The UK Food Standards Agency (FSA) started working with the food industry in 2003 and launched its consumer education campaign in 2005. By 2008 it had demonstrated a 0.9 gram reduction from 9.5 to 8.6 grams per person per day.[52] The UK attributes this reduction in intakes to

significant falls in the salt content of many key product categories,[16] which is likely to have been driven by the establishment of clear targets for salt levels in foods.

The market for products that can help to reduce sodium in foods reflects this situation. The number of patents around the world filed for low sodium foods increased from around 20 in 2000 to between 80 and 100 per year in the last five years and the number of patents for low salt in food increased from about 10 in 1998 to between 300 and 400 in the six years up to and including 2007.[17] New information about the effectiveness of different foods[18] or commercially available salt substitutes in reducing salt in foods,[19,20] passing consumer taste tests,[21] or reducing blood pressure[22] is emerging every day.

2.3 Some activity on portion size

Over ten food companies in Europe have made commitments to the EU Platform to reduce portion size. But a recent review of the literature on portion size in the United Kingdom[23] concluded that portion sizes had remained fairly constant for most products in the UK, although there was inconsistency between products. However, notable exceptions were ready meals, white sliced bread and some fast food items – where the portion sizes had increased. These foods all contribute significantly to intakes of salt, saturated fat and overall calories in the UK. The review noted that smaller pack sizes were available but tended to be in large multipacks but that the single units available at the same outlet tended to be larger. In addition, larger 'share type' packs have more recently become available. On the positive side, the report noted that some food companies had started to produce portion-controlled 100 calorie versions of standard or modified products and these were selling well, as were sales of portion controlled foods.

2.4 Several new European developments

There have been several new European developments in the last nine months (since the last Working Paper on Product Reformulation and Portion Size was completed):

- UK FSA strategy on saturated fat and energy[24-27]

The FSA has developed a broad program of work to reduce saturated fat and energy intakes and is currently consulting on draft recommendations on saturated fat and added sugar reductions, and on portion size availability, for biscuits, cakes, pastries, buns, chocolate confectionery and soft drinks. It will be in a position to report back on the key issues raised during the consultation in November.

- Salt, Fat, Sugar Symposium in Amsterdam[28]

A three day symposium on salt, fat and sugar held in Amsterdam in March brought together key food industry players to consider future EFSA regulations, the latest solutions to salt reduction, microbiological safety in reduced salt products, maintaining taste and texture whilst reducing fat, clarifying the impact of the regulation of health claims, the sugar industry response to trends towards lower sugar intakes, and sugar alternatives and the latest fibre-based solutions to reducing sugar. Copies of the presentations can be purchased from ficonferences.com

- Progress of EU funded *Food Pro-Fit*[29] program

This EU funded project with partners in the Balerics, Cyprus, Austria, Germany, Greece, Poland, Slovakia and Spain has developed a new online database tool for small and

medium-sized companies (SMEs) that want to reformulate their processed foods and meals. The tool contains a database of recipes that can be customised to control and reduce the amount of fats, salt and sugar in their product ranges. Before meeting the nutritional criteria, the safety aspects of recipe changes are checked. The database (not yet released) is also be relevant for regulators because of the need to be aware of the technical challenges for SMEs of reformulation and the potential solutions.

- New scientific developments

The range of new commercial technologies being developed to enable reduction of saturated fats or added sugars in foods is continuing to expand.

2.5 Increasing international action

Reformulation activity is increasing internationally promoted by national governments (e.g. Australia[30,19]), advocacy groups (e.g. World Action on Salt), individual companies[12,31] and industry groups. There are also indications that the acquisitions strategies of some companies are being driven by health considerations.[12]

Salt reduction strategies are increasingly being developed in countries around the world[32] and are being considered in some WHO regions.[33] Reformulation is also being considered as part of broader strategies in different areas such as the Pacific Island countries.[34] These are just a few examples. A more comprehensive overview would be useful to inform thinking on future action in Europe.

3. Lessons from Salt Reduction Strategies

Analysis of strategies around the world[32,33,35-38] as well as feedback from experts in the field suggests that there are a number of key lessons emerging from salt (and trans-fat) reduction that could be used to inform the development of future actions to reduce fat and sugar intakes. These include lessons on strategy development, working with the food industry and raising consumer awareness.

3.1 Strategy development

- A comprehensive strategy is needed which combines working with the food industry with raising consumer awareness and labelling
- Clear agreement on the science is key to effective progress
- Clear government leadership essential but with all relevant stakeholders identified and involved in the planning, implementation and assessment of the strategy
- Clear and measurable targets must be set by the government
- There needs to be a clear assessment of current levels of salt intake and contributions of different foods to salt in the diet in order to set targets
- There needs to be clear mechanisms for monitoring in order to hold industry to account and to demonstrate progress
- Dedicated staff and resources are needed to implement the program
- Support for small businesses is needed through networking and guidance

3.2 Working with the food industry

- Governments need to make it clear that the issue is a high priority
- Agreements need to be negotiated with all sectors of the food industry including retailers, manufacturers and the catering and restaurant sectors
- Industry should make step-by-step reductions by stealth until consumer awareness is raised
- Cross industry agreements are needed for some product categories (e.g. soups and sauces, breakfast cereals)
- Clear outcome targets (e.g. 350mg / 100g) for different products are easier to monitor than process targets and set a level playing field for the food industry
- Name and praise companies that commit to and achieve targets

3.3 Raising consumer awareness and labelling

- Media coverage should be used to increase consumer awareness
- A communications strategy to reach hard-to-reach groups is needed
- Baseline assessment of consumer awareness is required to inform a targeted multi-staged consumer awareness strategy
- Ongoing evaluation of the consumer awareness program is important to provide insights into how messages could or should be revised
- Involvement of and support for NGOs to participate in the campaign brings skills and knowledge required to communicate to hard to reach groups

- Front-of-pack labelling has been important in successful salt reduction strategies

4. Key technical issues in reformulating fat and sugar content

4.1 Overview

The review of the literature in this area suggests there are several key technical issues that affect the potential to reduce saturated? fat and sugar in food products. These concern technology, consumer acceptance, cost and policy, as summarized on the Table and described below.

Type of issue	Key issue	Key questions arising from issue
Technology	There are different technical approaches to reducing saturated fat and sugar	Which technical approach can best meet the objectives of reformulation? How does this vary with the nutrient and food product?
	Reformulation has implications for food structure and safety	Does the proposed reformulation have ay implications for food safety? Are there any potentially negative health impacts of sugar or fat substitutes or replacements?
	A single nutrient or a whole product approach can be taken	Is it more effective to address one nutrient or product composition as a whole? How does this vary with the product? What is the feasibility of each approach?
	Companies can either compete or collaborate on technological know-how	What are the health and commercial benefits of collaboration vs competition? Can the EC play a role in supporting collaboration without compromising competitive advantage?
Consumer	Consumers may not accept reformulated products	What type of taste testing and consumer research is necessary to ensure that consumers will accept reformulated foods?
	Reformulated products can be introduced by “stealth” or by marketing the change	What is the market for healthier products? Would it be an advantage or a disadvantage to market the product based on the fact that is has been reformulated?
Cost	Reformulation introduces costs to industry	What are the costs to the company going to be? Can these be integrated into ongoing costs of product development and testing?
	There are costs to governments of developing reformulation strategies	What are the priorities for government? What are the costs to government relative to costs saved by health benefits?
Policy	Government standards on food composition may affect the potential to reformulate	What is known about how global, European and national standards on food composition affect the potential to reformulate foods?
	Existing nutrient criteria may affect the incentives for industry to reformulate	What is known about how government-set and industry-led nutrient criteria influence product reformulation?

4.2 Technological issues

4.2.1 There are different technological approaches to reducing fat and sugar

There are a number of potential approaches to fat and sugar reduction. These approaches are different but not mutually exclusive:

- *Reducing the amount of fat or sugar without replacing it:* Reducing levels of fat and sugar in a product is the most obvious approach. Oils may be replaced by lower fat alternatives or reformulated with lower fat contents. Added sugar can often just be taken out. Yet there are limits to how far these nutrients can be reduced in different products without adversely affecting the safety or structure of food or compromising taste.
- *Use of fat or sugar replacements or substitutes:* The use of replacements or substitutes may need to be considered if there are limits in reducing the amount of fat and sugar.
- *Reducing energy density by adding water, air or fibre:* Water, air and fibre can increase the volume or weight of a food without increasing energy density.
- *Other technological approaches such as microparticulation or enzyme inhibitors*. Microparticulation uses special production techniques in conjunction with fat mimetics to create a more appealing texture and has been used successfully in the production of low fat ice-cream. Enzyme inhibitors reduce the break down and digestion of starch.
- *Reducing portion size:* Though not a reformulation of the nutrient profile, this approache reformulates the size of the foods offered and thereby could lead o reduced fat or sugar intakes. Several studies show that reducing energy density at the same time as decreasing portion size has a greater impact than could be achieved by just doing one or the other.[39,40]

Consideration should be given to which technical approach can best meet the objectives of reformulation, and how this varies with the nutrient and food product.

4.2.2 Reformulation has implications for food structure and safety

ats and sugars contribute to foods in a number of ways and reducing the amounts in foods may alter the food structure or compromise safety. Often food safety issues can be resolved by shortening the shelf life of a product but this has implications for cost as well as sustainability.. Fats are taste carriers and play a role in heat transfer and water activity of a product, and also contribute to its consistency, texture and mouth sensation. Where simply reducing the amount of fat in a food is no longer feasible, possible solutions include carbohydrate or fat-based substitution technology or using fat barriers to counter fat migration during deep frying.

The sugar content of some foods such as soft drinks, some convenience foods and sauces, can be reduced by simply lowering the amount of sugars added to the product, making the foods less sweet. However, sugar also contributes to food texture and volume and the many sugar substitutes on the market do not contribute these same qualities. Sugar contributes almost 100% of the bulk in some confectioneries. In baked goods, sugar not only provides bulk, but provides food for yeast and contributes to browning and in frozen desserts. Sugar also has a key role in determining the freezing point of a food, and contributes to texture. In these cases most sugar substitutes do not

work and sugar replacers (polyols) are used instead, but the amounts need to be carefully controlled to avoid adversely affecting taste or leading to stomach problems.[45] Blending low calorie sugar with protein or protein/carbohydrates from tropical plants is also being considered a viable alternative to standard sugar as a way of maintaining the texture and volume of a product.[46]

There is also an ongoing scientific debate about the safeness of some artificial sweeteners,[41] and mounting evidence suggests that consumers are increasingly looking for natural alternatives.[42,43] Sweetening agents have been used in low calorie soft drinks for some time now and considerable work has been done to assess the likely impact on diets.[44] However, there are still questions about the long term health impacts with some research indicating that consumption of low calorie soft drinks may actually lead to long term weight gain whilst other studies suggest that the use of sugar substitutes help people lose weight.[8]

The implications of product reformulation for food safety need to be taken into account, as well as any potential negative health impacts of the sugar or fat substitutes or replacements.

4.2.3 A single nutrient or a whole product approach can be taken

It would be counterproductive if the benefit of reducing the level of one nutrient is offset by an increase in another or of overall energy density. Reducing added sugars could be the most effective way of reducing energy density for some products (particularly soft drinks, flavoured milks and yoghurts) but for other products (e.g., ready meals), reducing sugars may actually lead to an increase in energy density, since fat contains more calories per gram than sugar. In this case, it would be important to consider what other approach could be taken to avoid an increase in energy density.

Whilst some countries have identified single nutrients as priorities (e.g. UK salt or Denmark trans-fats), this was largely due to a confluence of scientific and political circumstances making it appropriate to focus on these nutrients at that particular time. But with the pressure and momentum for reformulation mounting, it is likely that governments and the food industry will now want to consider the benefits and challenges or taking a whole product approach.

Consideration should be given to whether it is more effective to address one nutrient or product composition as a whole, and how this varies with the product in question and the feasibility of making reductions.

4.2.4 Companies can either compete or collaborate on technological know-how

Food companies may perceive reformulation as a means of gaining competitive advantage in the consumer market. If so, they are likely to want to retain their technological know-how on reformulation for their own exclusive use. On the other hand, the sharing of effective technologies may lead to greater impact. One of the key challenges of moving forwards at an EU level will be how to ensure that as much information as possible is shared without compromising the competitive advantages of market leaders who are more likely to have invested in the R&D.

Consideration is needed of the health and commercial benefits of collaboration vs competition, and whether the EC can play a role in supporting collaboration without compromising competitive advantage.

4.3. Consumer issues

4.3.1 Consumers may not accept reformulated products

As often pointed out by the food industry, reformulation will only work if the products are accepted by consumers. Consumers may not accept the products if:

- *They do not like the product*:: The change in taste or other qualities means they no longer like the product.
- *They perceive that they do not like the product:* If consumers are made aware that the product has been reformulated to include less fats or sugars, they may assume that it will taste less good because they associate low fat or sugar with poor taste. This is a psychological barrier related to the "health or stealth" issue discussed below.
- *They are wary of "artificial" ingredients and prefer products made with "natural" sugars and fats:* There is an increasing trend for consumers to prefer "natural" ingredients relative to sugar, salt replacements and fat replacements in foods.[47]
- *They are not willing to pay a higher price:* Most low fat or reduced sugar foods are more expensive than their standard counterparts[8,48]. Consumers may be unwilling to pay more for products just because they have lower levels of fat or sugar.[47] Price is also a disincentive to consumers buying smaller portion sizes or individually packaged foods as these are often more expensive, proportionally, than their standard sized counterparts.

Consideration should be given to the taste testing and consumer research needed to ensure that any difference in taste, product quality and price do not introduce disincentives to the purchase of reformulated products.

4.3.2 Reformulated products can be introduced by "stealth" or by marketing the change

Consumers may be more likely to accept reformulated products when they do not know they have been reformulated *or* they may be more likely to accept them if they are marketed as "healthier" products. Thus a company has to decide whether to reformulate foods without informing consumers to avoid the problem of consumers being turned away from a product because they perceive it to be inferior. Or, alternatively, they may want to use reformulation as an opportunity to market the food based on increased health benefits. Companies can both respond to and set the market trends in this respect. For example, several companies report that that their consumers associate low salt with low taste and therefore have decided against promoting the reduced salt content of products. In this case, changing by "stealth" is the preferred way forward. In other situations, such as where consumer awareness about the importance of reducing salt intakes has increased due to the consumer campaigns (as in the UK), retailers and manufacturers are increasingly promoting the reduced salt content of their products.

Consideration is needed of the advantages and disadvantages of marketing the reformulated product as "reformulated," taking into account consumer tastes and

perceptions, and considering long-term as well as short term benefits of the different approaches.

4.4 Cost benefit issues

4.4.1 Reformulation introduces costs to industry

Costs of reformulation include the costs of any new ingredients, changes to food processing machinery, staff time and training as well as the cost of changing labels. Many of these costs are likely to be absorbed within existing product development budgets. Some models exist to estimate the likely costs[49] and Regulatory Impact Assessments have been undertaken in relation to the costs of reformulation to both to the food industry and the government in the UK[26,50] The FSA highlights the fact that most products are reformulated at about 3 yearly intervals as part of the normal business cycle and therefore much of the cost of reformulation is not a new cost for businesses to bear. However, the annual increase in ingredients cost are likely to be fairly significant to ensure that saturated fats and sugars can be reduced effectively without compromising taste, texture or safety and to take into account the need for factory runs and sensory testing. The FSA Regulatory Impact Assessment for saturated fat and added sugar reductions and portion size provides a comprehensive overview of the likely standard and variable costs to industry. The precise costs are estimated to vary considerably depending on the type of company, the product and the processing technique being employed.

Companies need to consider how much of reformulation costs, where saturated fat or energy reduction has taken place, relate directly to saturated fat/added sugar/portion size and how much are relate to other product changes that would have occurred as part of the normal business cycle.

4.4.2 There are costs to governments of developing reformulation strategies

There are also costs to government related to the development and implementation of reformulation strategies, consisting of staff time to: undertake or commission any research required to support the strategy; develop and implement the strategy; and ensure effective monitoring processes are in place. However, the voluntary approaches taken by most governments so far reduce the cost relative to legislative approaches.

4.4.3 The costs are outweighed by the benefits

In addition, the costs saved through the health benefits may outweigh the costs of reformulation. For example, the UK FSA estimated the annual health benefits afforded by a half a percentage point reduction in saturated fat (i.e. from current intakes of 13.3% of food energy to 12.8%) as 217,500 Quality Adjusted Life Years (QALYs).

Government's need to consider undertaking Regulatory Impact Assessments to take into account costs to government and industry as well as the health benefits of reformulation.

4.5 Policy issues

4.5.1 Government standards on food composition may affect the potential to reformulate foods

Existing legislation may either prevent or support reformulation of foods. Compositional standards or defining criteria for certain foods (e.g. chocolate, ice-cream, specialty cheeses) might mean it is not possible to make changes without a change in legislation. At the other end of the spectrum, specific government reformulation targets for specific food products (as with the FSA salt reduction program), may guide all companies towards certain levels of nutrients for certain foods.

An overview of how government standards on food composition affect the potential to reformulate foods would be useful.

4.5.2 The presence of existing nutrient criteria areas may affect the incentives for industry to reformulate foods

Existing or developing nutrient criteria developed by governments may also influence action, such as the nutrient criteria for food in schools, for nutrient claims (e.g. “low in fat”), health claims, front-of-pack labelling, or food advertising to children. Companies maybe motivated by these criteria to reformulate foods in order that they can, for example, bear a health claim or be marketed to children. Most leading food companies have now also introduced their own nutrient profiling models, and this may also affect reformulation.

Further insights into how government-set and industry-led nutrient criteria influence product reformulation would be useful .

5. Possible Opportunities for Action

5.1 EU Framework for national action on reformulation of fat and sugar

The EC could develop a framework to support national action on the reformulation of fat and sugar, including consideration of energy density and portion size, building on the EU Framework for National Salt Initiatives.[51] Such a framework could include the same 5 strands of action as the salt framework – data, benchmarks and major food categories to focus action on, reformulation, raising public awareness and monitoring and evaluation. It may be useful to integrate these frameworks in the future, but separate frameworks may facilitate monitoring of the different nutrients. Some of the elements that might be included in the different strands of such a framework are detailed below.

5.2 Data

5.2.1 Data on food intakes and composition of foods

Member States could investigate the national data available on composition of foods and contribution of different foods and portion sizes to nutrient intakes.

5.2.2 Modelling the impact of changes in the food supply on health

The EU Platform has already identified the need to model the impact of reformulation changes on population health outcomes. There is a limited amount of work available on this.[2,52,53] The George Institute for International Health in Sydney has also commenced work to model the impact of different changes on the food supply on population health outcomes. Modelling the impact of changes in the food supply on health would help to inform strategies and identify priorities for reformulation

5.3 Benchmarks and major food categories of focus

5.3.1 Standard levels for different nutrients in key products and meals

There is considerable scope for member states to develop national standard levels or targets for different nutrients in key products so that companies have a clear benchmark to work towards. Similar standards could be developed for take-away foods and meals in restaurant and catering establishments. Several countries have already introduced nutrient standards for meals in institutions and some of the main food service companies have introduced their own standards for meals.

5.3.2 Building on existing legislation

Where existing consumer protection regulations are already in place to stipulate, for example, that a product must contain no more than 30% fat or alternatively label the product to indicate that it includes additional fat , companies should reformulate to within the limits originally set.

5.3.3 Guidance on standard portion size

Consideration could also be given to have standard acceptable calorie amounts for snacks (e.g. British Nutrition Foundation recommends less than 160 calories) and convenience foods (pizza, ready meals etc) and with consistent advice provided to consumers (for example to limit snacks to no more than 2 a day).

5.4 Reformulation

5.4.1 Where to focus

Most impact can be had by focusing reformulation activities on basic foods commonly eaten by all socio-economic classes of a population,[13] making sure the full range from premium to economy are included so that all socio economic groups are affected and prioritising products with the largest market share.

Focus could also be on areas where it has already been demonstrated that reductions are possible. For example, the Netherlands Organization for Applied Scientific Research (TNO) has demonstrated that a 33% reduction of saturated fat in the end product, without any loss of quality, could be achieved for biscuits, cakes and cream fillings.[54] It would be useful to collate further examples of success.

5.4.2 Developing initiatives of the restaurant and catering sector

The proportion of food that is now eaten out of the home is increasing. The restaurant and catering sector therefore has an increasingly important role to play, both on the nutritional composition of meals and menus and providing information to consumers. Further discussions could be held to consider how best to act on this.[55]

5.5 Raising consumer awareness

5.5.1 Consumer education campaigns

It would be useful to collate information on the relative effectiveness of different consumer campaigns that have been implemented in conjunction with reformulation strategies in different Member States, with a view to developing guidelines on campaign development. Any such guidelines would need to take into account both market and cultural differences.

5.5.2 Changing the balance of marketing

Efforts to consumer awareness maybe very small relative to the huge advertising budgets that companies commit to launching a single new brand (which maybe against public health interests). Changing the balance of marketing, in addition to modifying the composition of foods and portion size, could be considered as part of any strategy to improve nutrition. The UK FSA is currently consulting on proposals for reducing saturated fat and energy which include recommendations for changing the balance of marketing and may have further information to contribute on this issue.

5.5.3 Front of pack labelling

There is increasing evidence that interpretive front of pack labelling is driving reformulation in many countries (Sweden,[13] New Zealand,[56] Netherlands[53]) and has been key to the success of national salt reduction strategies in others (UK,[57] Finland[58]).

Strategies for reformulation of foods should be considered in parallel with Front of Pack Labelling schemes. Some sort of labelling scheme to highlight the fact that a snack is portion controlled to consumers could also be considered.

5.6 Monitoring and evaluation

5.6.1 European database to monitor composition of foods

Effective mechanisms for monitoring progress are key to support food industry reformulation efforts. A number of countries (UK, France, Finland) have already established some form of nutrient databank to collate information on the nutrient composition of foods. The EU could consider action to ensure that such initiatives are supported and can be replicated in all countries so that comparison across countries is possible. Consideration could also be given to the potential benefits of linking with wider international initiatives such as the international database project being developed by the George Institute for International Health in Sydney

5.6.2 Monitoring changes in the composition of meals eaten away-from-home

Consideration could also be given to monitoring changes in the composition of meals and foods eaten outside of the home. Some estimates have indicated that foods eaten out of the home contribute to between 30 and 40% of total energy intake.[43]

6. Relevant resources for moving forwards

6.1 FSA consultation on saturated fat and energy balance

The UK FSA has already developed much of its strategy on saturated fat and energy intake, which includes improving consumer awareness, encouraging increased availability and promotion of healthier options and smaller food portion sizes, and encouraging voluntary reformulation of mainstream products to reduce saturated fat and energy. A range of resources about reducing saturated fat and portion sizes are available.[23,24,59,60,27] The FSA is now consulting on draft recommendations for saturated fat and added sugar reductions, and on portion size availability, for biscuits, cakes, pastries, buns, chocolate confectionery and soft drinks[61] with a deadline of November 3.

6.2 Technical support and advice

There is a growing body of research and technical advice[62,60,63,64,54] available from food companies, trade associations, food technology institutes and public health organisations such as CSIRO, TNO, Leatherhead Food International as well as from recent seminars such as the Salt, Fat Sugar Symposium held in Amsterdam earlier in the year. Much of this is referenced in this report. This includes useful case studies and examples of the extent to which different reductions are possible.

6.3 Food Pro-Fit

This Commission funded project has developed an online database tool for small and medium sized companies (SMEs) that want to reformulate their products according to different nutritional objectives and using the HACCP model. When the database is

released it is envisaged that it will be of relevance to regulators as well as food companies as it will help provide further information about some of the technical challenges.

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Annex 1

Full list of the quantitative outputs of commitments on reformulation and portion size from working paper (April 2009)

Summarising the above text, the following is a full list of all the outputs that are quantified in the monitoring report:

- The UK FSA showed that population average dietary salt intakes had fallen to 8.6g (from 9.5g in 2000/1).
- Salt reductions on between 25-55% have been achieved in a number of foods in the UK.
- EROSKI reformulated 51 products to remove TFAs.
- Four out of 10 (43%) companies in the CIAA survey say they have reduced the amount of saturated fat, salt or sugar.
- 29% of companies say they have introduced products with less saturated fat, salt or sugar
- Mars Inc reduced bar weight by an average of 7%.
- Mars Inc made salt reductions of between 22 and 35% in a range of products.
- Unilever eliminated 11,000 tonnes of SFAs, 370 tonnes of TFAs, 640 tonnes of sodium, and 20.000 tonnes of sugar from the food supply.
- The FERRERO group introduced four new products onto the market.
- FERCO had five informal meetings involving 12 people as part of a partnership project.
- COMPASS FR: more than 35,000 healthy recipes centrally managed.
- COMPASS NL: 70% of soup recipes are low salt and there has been 40% reduction in calories.
- COMPASS IT: fried foods no longer used in 60% of units.
- COMPASS UK: Balanced choices increased from 602 to 750.
- SODEXHO UK: 80% of salad items served without dressings. 300 low calories sandwiches with reduced salt bread.
- SODEXHO IT: salt action on 480 sites involving 2,500 staff; breakfast at school on more than 35 sites for 9,000 pupils; vegetable offer at 80 workplaces for 25,000 consumers.
- FEADRS Spain introduced a school program involved 67 schools totaling 14,000 pupils (aged 6-10).
- ELIOR UK: 75% increase in number of sites running the “Balance” programme. 37.7% of these sites have healthy eating or flagship award. 50.5% offer small portion desserts. Survey showed 73.4% sites offer fish 3x/wk; 77% sites offer fried fish max 1x/wk; 17% of sites don’t offer fish at all; 67% of sites offer oily fish at least 2x/wk; 91% of sites offer low fat potato option; 95% sites offer a healthy hot main dish; 68% offer healthy snacks; 26% do not offer snacks any more; 21% no longer offer fried eggs; 69% offer healthier options next to fried eggs; 52% of sites have removed salt from the tables with the agreement of clients.
- ALBRON NL – more than 4,000 entries in Food Specification Database
- Goody’s salt extension program will result in a 3.6 tonne annual salt reduction (from hamburgers) and six tonne salt reduction (from bakery products).

- Goody's switch from palm oil to olive oil has resulted in a 300% reduction in SFAs (this is obviously not possible but this is what they said!).
- Quick's not using salt on fries reduced salt consumption by 161 tonnes.
- Quick's hamburger fat reduction affected 90 million hamburgers at six grams of fat per hamburger which is equivalent to 25% less of GDA for a female.
- Burger King reduced salt by between 8 and 42% in range of kids products.
- YUM reduced salt by 60 tonnes, oil by 160 tonnes, and SFAs in core products by 20 tonnes.