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ВСЕМИРНАЯ ОРГАНИЗАЦИЯ ЗДРАВООХРАНЕНИЯ  
ЕВРОПЕЙСКОЕ РЕГИОНАЛЬНОЕ БЮРО

## **WHO Action Network on Salt Reduction in the Population in the European Region (ESAN)**

### **Report of the meeting in Athens, Greece, 16 – 17 June 2015**

**WHO Action Network on Salt Reduction  
in the Population in the European Region (ESAN)**

**16 – 17 June 2015, Athens, Greece**

**Meeting Report**

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# WHO Action Network on Salt Reduction in the Population in the European Region (ESAN)

16 – 17 June 2015, Athens, Greece

## Background and aim of the network

The WHO Action Network on Salt Reduction in the Population in the European Region (hereafter referred to as ESAN or ‘the network’) was established in 2007 under the auspices of the WHO and with the support of the United Kingdom Food Standards Agency (FSA). Since May 2013 Switzerland has chaired ESAN.

The network was established as a response to the increasing salt consumption of the population. Salt reduction plays a very important role in supporting the achievement of the reduction of noncommunicable diseases (NCDs) in the European population. WHO Europe has listed salt reduction as one of the priority interventions in the most recent *Action Plan for the implementation of the European Strategy on the Prevention and Control of Noncommunicable Diseases (2012-2016)*.

In line with the action plan, the network aims to:

- a) promote the identification and sharing of national policies on salt reduction and the types of action undertaken;
- b) describe monitoring and evaluation strategies of salt reduction initiatives;
- c) discuss the public health and cost benefits of salt reduction strategies in different countries;
- d) develop good practice in the area of policy development, implementation, monitoring and evaluation;
- e) promote the development of science and food technology in the relevant areas;
- f) explore the links between salt reduction policies and inequalities.

## *Organisation of the network*

Since May 2013, the Federal Food Safety and Veterinary Office of Switzerland has chaired the network. As of June 2015, the network consists of more than 20 of the WHO European Region Member States. Participants in the network work in governmental institutions – i.e., Ministries of Health, Public Health Institutes, Health Directorates, and Food Agencies/ Food Safety Authorities – or have been nominated by the government. Furthermore, representatives of WHO and WHO collaborating centres participate in the network.

Representatives from network Member States usually meet once per year. The meeting is organized by the ESAN leading country, in close collaboration with the WHO Regional Office for Europe. The network meeting is an important arena for sharing and discussing experiences in salt reduction strategies.

The 2015 network meeting was held in Athens, Greece on 16-17 June 2015. The Hellenic Health Foundation hosted the meeting. Representatives from 13 countries (Albania, Bulgaria, Croatia, Cyprus, Finland, Greece, Hungary, Ireland, Israel, Norway, Sweden, Switzerland and the Netherlands), the WHO, the European

Commission, the WHO collaborating centres RIVM and University of Warwick and invited external speakers attended the meeting.

### Opening addresses

Antonia Trichopoulou, Hellenic Health Foundation, Greece welcomed participants on behalf of the host organization.

Eirini Tsigarida, Hellenic Food Authority (EFET), Greece, welcomed participants to Athens. The Authority is delighted and honoured that this meeting is taking place in Greece. The Authority is very supportive of work on salt reduction. It is clear that tackling the NCD epidemic requires international collaboration, and the ESAN is an excellent example of this. She wished everyone a successful meeting.

João Breda, WHO Regional Office for Europe, welcomed participants on behalf of WHO. The high level of Member State participation in the meeting is a sign of the ongoing commitment to this network. The success of the network is evident, and the informal nature of the network allows for a lot of collaboration. He thanked the Hellenic Health Foundation for hosting the meeting, and he particularly commended Professor Trichopoulou for her longstanding collaboration with WHO. It is very fitting to be having the meeting in Greece, the birthplace of one of the healthiest diet in the world. He also thanked the network Secretariat and Chair for all their work and leadership for the network.

As Chair of the network, Michael Beer, Federal Food Safety and Veterinary Office, Switzerland, welcomed participants on behalf of ESAN. The key objective of the meeting is to exchange knowledge. It would be valuable if this exchange of information can also continue throughout the year, and participants were reminded to send new information to the Secretariat.

### Session 1: Update on salt reduction strategies within the WHO European Region

The first session focused on bringing participants up to date on developments in salt reduction at the global and European levels, and included some examples of national developments.

#### WHO global status report on noncommunicable disease – focus on salt in Europe

João Breda provided an update on developments in relation to salt in Europe, and Temo Waqanivalu, WHO Headquarters, gave an overview of the latest global developments.

NCDs are the leading cause of death and disability in the European region – causing more deaths than all other causes combined – and are largely preventable. The latest global NCD status report<sup>1</sup> shows that the European Region is one of the most heavily affected regions.

Without concerted efforts it will be very difficult to achieve the voluntary global NCD targets for 2025. The global target for a 30% reduction in in salt/sodium intakes is very challenging – not only because it will require a major effort, but also because it is often difficult to assess the levels of intakes.

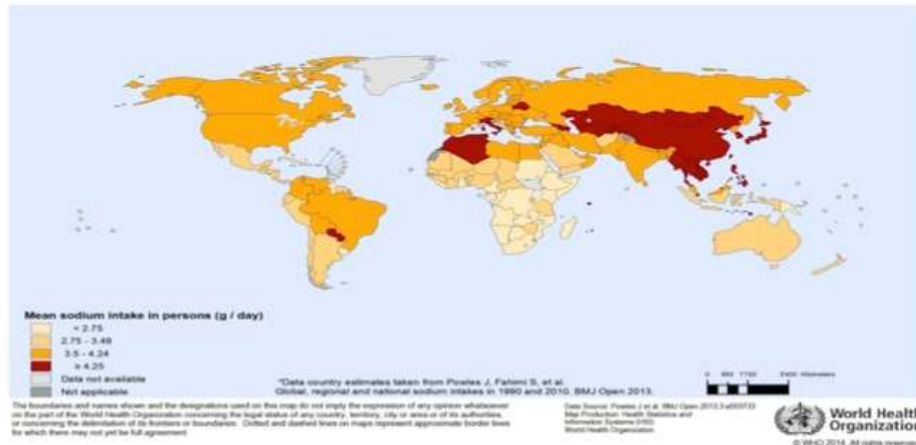
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<sup>1</sup> World Health Organization. Global status report on noncommunicable diseases 2014. Geneva: World Health Organization; 2014.

The global target for a 25% reduction in raised blood pressure is also very challenging. Now that comparable prevalence estimates have shown that other WHO regions, such as Africa, for example, have a heavy burden of raised blood pressure, it has become easier to mobilize resources for salt reduction.

Globally, the average salt intake is 10 g per day and 80% of this is derived from processed foods.

Figure 1 Salt consumption: Mean sodium intake in persons 20 years and over, 2010



WHO has set out a toolkit of strategies for population salt reduction (Figure 2). Industry action is the first point of call, through product reformulation. In countries where there is little domestic production of food, the strengthening of regulation on imported food should also be part of the solution. It also remains important to empower consumers and to educate people about the links between salt, raised blood pressure and cardiovascular disease. Supportive settings are also important, through the implementation of local policies influencing the settings where people live, work, play and eat.

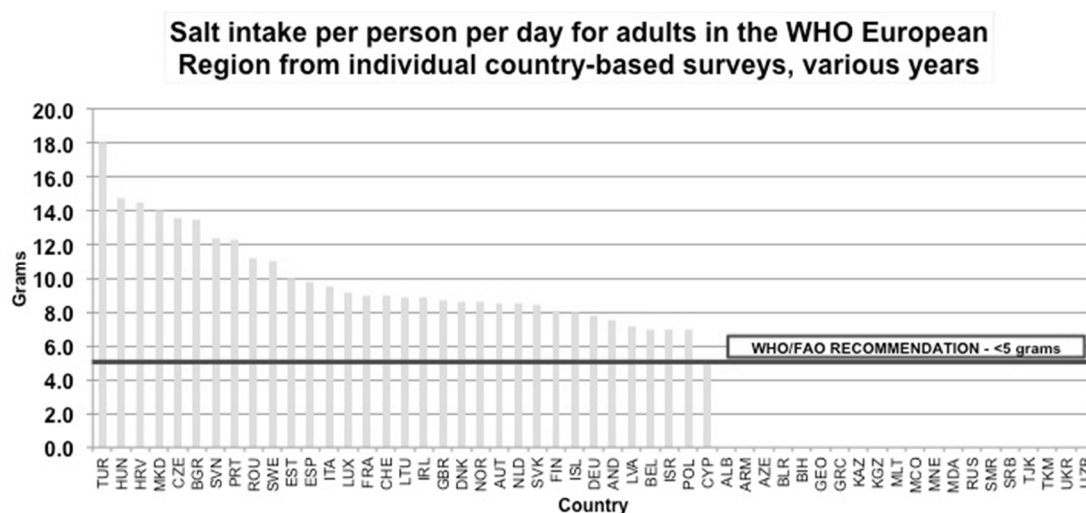
Figure 2 Population salt reduction strategies

WHAT	①	INDUSTRY ACTION	②	EMPOWER CONSUMERS	③	SUPPORTIVE SETTINGS
	HOW	Product Reformulation	Consumer Education	Local Policies		
		Food Regulations	Marketing & Mobilization	Catering Guidelines		
OUTCOME	Reduction of salt in processed foods	Reduction of use and consumption of salt	Reduction of use of salt			
	<ul style="list-style-type: none"> <li>Industry Commitment</li> <li>Food Targets/Standards</li> <li>Proper labeling</li> <li>Fiscal Measures</li> </ul>	<ul style="list-style-type: none"> <li>Public Awareness and education campaign</li> <li>Behavior Change campaign</li> <li>Health Literacy</li> </ul>	<ul style="list-style-type: none"> <li>Food outlets</li> <li>Events and functions</li> <li>Settings (Schools, Health Care Facilities)</li> </ul>			

The *Vienna Declaration on Nutrition and Noncommunicable Diseases in the Context of Health 2020* laid the foundation for the work across the region to improve diet. There is a high degree of political commitment to reducing salt across the Region and salt figures prominently in the *European Food and Nutrition Action Plan 2015 - 2020*.

Available data on intakes across the Region suggest that no country is meeting the current WHO/FAO recommendation for 5 g or less per day. The picture may be even worse – since those countries with good quality data based on urine analyses tend to have higher intakes. Fourteen countries have completed 24-hour urinary excretion studies.

**Figure 3 Salt intake per person per day for adults in the WHO European Region from individual country-based surveys, various years**



Evidence continues to emerge that salt has a negative impact on cardiovascular disease and maybe on other diseases.<sup>2,3</sup> WHO has developed two relevant recommendations on sodium<sup>4</sup> and potassium.<sup>5</sup> Member States are encouraged to use these recommendations and to drive forward policies to meet the recommended intakes. Work by RIVM in the Netherlands has modelled the health gains, in terms of lives saved by changing the prevalence of stroke and ischaemic heart disease, if the WHO target were to be achieved by 2025.<sup>6</sup>

WHO is working with Member States to improve the methods for measuring intakes. Member States are encouraged to do *at least* one 24-hour urine excretion study, which can then be used to validate survey results.

WHO's mapping of salt reduction initiatives in the WHO European Region showed that there is considerable political will to reduce salt, and progress has been made – over half of countries (30) have partially or fully implemented salt reduction initiatives. However, there remains room for improvement. A comprehensive approach towards salt reduction needs to encompass reformulation, quality data, monitoring and evaluation, raising public awareness and setting of benchmarks. Only 14 Member

<sup>2</sup> Dietary salt risks go beyond blood pressure, warns new study Nathan Gray, 11-Mar-2015. [http://www.foodnavigator.com/Science/Dietary-salt-risks-go-beyond-blood-pressure-warns-new-study?utm\\_source=copyright&utm\\_medium=OnSite&utm\\_campaign=copyright](http://www.foodnavigator.com/Science/Dietary-salt-risks-go-beyond-blood-pressure-warns-new-study?utm_source=copyright&utm_medium=OnSite&utm_campaign=copyright)

<sup>3</sup> He JF, Pombo-Rodrigues S, MacGregor GA. Public health - Research: Salt reduction in England from 2003 to 2011: its relationship to blood pressure, stroke and ischaemic heart disease mortality. *BMJ Open* 2014;4:4 e004549 doi:10.1136/bmjopen-2013-004549

<sup>4</sup> WHO. Guideline: Sodium intake for adults and children. Geneva, World Health Organization (WHO), 2012.

<sup>5</sup> WHO. Guideline: Potassium intake for adults and children. Geneva, World Health Organization (WHO), 2012.

<sup>6</sup> Hendriksen MAH, van Raaij JMA, Geleijnse JM, Breda J, Boshuizen HC. Health Gain by Salt Reduction in Europe: A Modelling Study. Gorlova OY, ed. *PLoS ONE*. 2015;10(3):e0118873. doi:10.1371/journal.pone.0118873.

States are using the gold standard 24-hour urine excretion methodology to evaluate salt intakes. Thirty-three countries have set a national target or population goals, but these are not all fully aligned with the new WHO recommendation. Research has begun into the impact of salt reduction policies on inequalities<sup>7</sup>, and this is one area that requires much further work.

In conclusion, there has been good progress in some countries and encouraging developments in many others. Further progress is needed, however, to translate this political commitment into concrete policy action, and to improve comprehensive and coverage of programmes.

The studies mentioned in the presentation will be placed on the network's extranet. Representatives were urged to use the WHO studies to inform and drive forward policy in their countries.

### Member updates

Some of the network member countries gave an update on their recent activities.

#### Greece

George Marakis, Hellenic Food Authority, provided an update on Greece's salt reduction actions during the economic crisis. With falling salaries and changing prices changes in food consumption patterns are likely but are difficult to predict.

Greece has launched awareness-raising actions, including traditional methods (printed brochures, articles in magazines and newspapers and television adverts) and low-cost methods (corporate social responsibility (CSR) of non-food companies and institutions, memorandum of commitment with the associations, unions and clubs of food business operators to pass the message to their members). One successful example of the campaign targeting company CSR was the free placement of adverts – with central messages on hidden sources of salt and how to read food labels – on plasma TV screens on all underground stations, reaching 650,000 commuters. An example of partnership with an association, was the collaboration with the Hellenic Chef's Club to improve the nutritional content of dishes by reducing salt and eliminating trans fatty acids and to promote the use of herbs to enhance taste (*'Say yes to herbs, No to salt'*). A campaign in schools sought to raise awareness among teachers and pupils about healthy eating, with a particular emphasis on salt reduction.

More work needs to be done on reformulation. Work with more than 15,000 artisan craft bakeries is ongoing. Analyses found that 24% of artisanal bread samples contained salt levels higher than the current maximum level of 1.5%. Presentation of this data to the bakers' raised their awareness of the current situation (some breads contained higher than the national limit for salt) and fostered a more positive attitude towards a voluntary 10% salt reduction and an eventual goal of 1.2% salt in products. The written commitment is yet to be signed. The bakers also asked for government support to raise public awareness in order to create a more favourable market.

Other ongoing recent actions include a study on dietary salt intake using 24-hour urine collection (preliminary data suggest the average intake is 10.01 g /day) and creation of

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<sup>7</sup> Rodrigo Rodriguez-Fernandez, Margarida Siopa, Sarah J Simpson, Rachel M Amiya, Joao Breda and Francesco P Cappuccio (2014). Review Article. Current salt reduction policies across gradients of inequality-adjusted human development in the WHO European region: minding the gaps . *Public Health Nutrition*, 17, pp 1894-1904. doi:10.1017/S136898001300195X.

a Food Information Database, which will enable monitoring of food reformulation actions. Analyses of 18 brands of packaged sliced breads in June 2015, carried out for the pilot phase of the food information tool found that the mean salt content of 1.15 g /100 g, with a range of 0.73 – 1.5 g /100 g.

### *Discussion*

Experience elsewhere has suggested that when negotiating with craft bakers, for example, it is helpful to point out the range of salt contents identified – and advocate for all to shift to the lower end of that range, since this is clearly feasible.

There was discussion about the salt content of feta cheese. In general, in designated products (such as Protected Designation of Origin – PDO – dairy products) one has to be very careful and always check the specifications of the product (i.e. whether a specific salt content is included in its specifications). If the specifications are such that do not allow salt reduction without altering the product's name, then it is important to focus on educating people on reasonable consumption levels.

The initial results of the nationally representative nutritional survey were presented very recently. These suggest that fruit consumption has decreased and that legume consumption has increased while meat consumption has fallen. It is not clear to what extent this is a result of the economic crisis, the impact of globalization or the abandonment of the traditional diet.

### *Hungary*

Eva Martos, National Institute for Pharmacy and Nutrition, gave an overview of recent developments in Hungary.

Hungary continues to have one of the highest salt intakes in Europe (second to Turkey).<sup>8</sup> An important milestone since the last ESAN meeting has been the passing of a Decree on nutritional standards of public catering. This requires a number of measures to reduce salt intake:

- Salt content of each meal has to be indicated on the menu;
- Salt content of the meal should be gradually decreased to the age-appropriate specified level;
- No salt or sugar shakers should be placed on tables, otherwise it is mandatory to indicate: *'Excessive salt consumption may lead to CVD, obesity and diabetes'*;
- Salt-containing flavouring powder, paste, salt-containing instant soups shall not be used in addition to purposes of improving flavouring;
- Usage of meat products is restricted.

The age-appropriate specified levels have defined the maximum amount of total salt allowed in the daily menu for different age groups (children and adults) and for different types of catering (full-day catering, nursery catering, catering services three times per day, catering services once per day).

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<sup>8</sup> Ref: Survey on Member States implementation of the EU Salt Reduction Framework. [http://ec.europa.eu/health/nutrition\\_physical\\_activity/docs/salt\\_report1\\_en.pdf](http://ec.europa.eu/health/nutrition_physical_activity/docs/salt_report1_en.pdf)



In addition, Hungarian food standards (*Codex Alimentarius Hungaricus*) have been modified to reduce the upper limit of salt in bread to 2.5% of dry matter by January 2015, with a further reduction to 2.35% in 2018. Changes to the upper limits for processed meat products are expected to come into force next year, including for popular products such as Hungarian salami.

A contract has been drawn up with the Hungarian Bakery Association setting up a two-step reduction of the salt content and an online calculator has been devised to enable bakers to easily calculate the salt content of bread.

Nine companies have joined a new voluntary initiative from the Federation of Hungarian Food Industries' commitment to help consumers to achieve a gradual drop in dietary salt intake.

To enable monitoring and evaluation, the Institute had set up a programme of laboratory analysis to track trends and monitor reformulation. In addition, a National Diet and Nutritional Status Survey took place in 2014. Meanwhile, a further impact assessment, supported by WHO, on the effect of the Public Health Product Tax is ongoing.

### *Discussion*

In response to a question Eva Martos clarified that the industry's voluntary initiative also includes action on marketing to kids, reformulation on sugar and fat contents and promoting physical activity.

### **Norway**

Hilde Skyvulstad, Norwegian Directorate of Health, gave an overview of Norway's *Salt action plan 2014-2018*.

In Norway, average intake is estimated to be about 10 g per day and the country's dietary guidelines recommend a gradual reduction to 5 g per day in the longer term and 6 g per day in the medium term.

The action plan has five focus areas:

- Communication – aiming to increase knowledge about recommended intakes, sources of salt and its health impact to improve people's capacity to reduce salt when buying and at home, and to increase demands for products with less salt. This will be done through traditional means, social media and through alliances with NGOs;
- Labelling – the Nordic keyhole label, which identifies healthier food products within a food category, has had stricter criteria for salt since March 2015;
- Monitoring – both the salt intake in the population and the salt content in processed food products are monitored. Salt intakes are measured in national dietary studies and in 2015 urine samples – both 24-hour collection and spot tests – will be collected from a population and analyzed. Two hundred indicator/key products have been selected and will be monitored during the period of the action plan. Possible use of the food industry's databank of processed food, called Trade solution, is also being explored.
- Salt reduction in food products – implemented by the partnership for salt reduction in Norway involving the food and catering industries, authorities, research institutes, consumer organizations and NGOs and the salt partnership.
- Salt reduction in restaurants and catering – also part of the partnership for salt reduction, which involves the catering industries.

The Minister of Health established a food industry group to address the industries responsibilities to improve public health. At the first meeting the Minister presented the salt action plan to industry senior management, who then promised to reduce salt contents and promote healthier alternatives. This received a lot of media coverage and was an important contribution to the salt partnership.

In the salt partnership, four (currently six) working groups, one per food group or category, are run by the food industry themselves, and their main task is to develop voluntary salt reduction targets and work with a monitoring system, as well as to facilitate exchange of information and experience. The board includes representatives from each working group as well as representatives from research institutes, trade associations, NGOs, retailers and the authorities. It is hoped that the Partnership agreement will be finalized and signed in October 2015. There are four areas of work for the partnership: communication to raise consumer awareness on salt, collective work on overcoming the challenges to reaching the voluntary salt reduction targets, a common monitoring system and research to help meet the long-term goals.

The voluntary salt reduction targets have been devised using data on volume and salt content for products on the Norwegian market in 2014. A weighted salt level has been calculated per product category, then used to set the salt reduction targets.

The catering sector faces some different challenges, such as how to ensure healthier procurement and how to improve kitchen practice. Consumer information is also essential – one of the key messages being promoted is '*Less salt. Better health*'.

Finally, a salt model, based on the latest Norwegian dietary survey Norkost 3, is under development to check how the salt reduction targets will change the salt intake of the Norwegian population. This is intended as a sort of quality control, to assess whether the salt reduction targets will be ambitious enough to reach a 15% reduction in salt intake by 2018.

### *Discussion*

In response to a question, Hilde Skyvulstad clarified that the spot urine test was being carried out independently of the 24-hour urine collection (rather than as a fraction of the 24-hour test).

There was discussion about the degree to which the food industry was involved in the setting of benchmarks. The industry, the Directorate, and other actors in the salt partnership are involved in setting the salt reduction targets.

### ***Nordic Salt Awareness Campaign***

Anette Jansson, National Food Agency, Sweden, gave an update on the Nordic salt awareness campaign taking place in Sweden, Norway, Denmark and Iceland. This campaign has started with a consumer survey on knowledge of salt intakes, risks and sources. The survey found that a high proportion of people (between 80 and 86%) do not know the recommended level of salt, and that a high proportion consider their own intakes are 'as recommended' or 'little more'. The majority of people did know, however, that the industrial products are the biggest source of salt in food, and industry salt reductions were the most popular option for helping people to cut salt intakes in all four countries. This data was used to build the awareness campaign.

The main messages of the campaign are:

- We eat twice as much salt as recommended – much more than the body needs. The Swedish guideline recommends not exceeding 6 grams per day.
- Too much salt likely to affect health – reducing salt intake by about a quarter can save 1,000 lives each year.
- Even a small reduction in salt provides health benefits.
- Today, one cannot reduce salt – most of it comes from the prepared foods deli/meat, cheese, bread.
- Gain pressure towards the industry from the consumer to minimize salt in the products.
- There is an easy way to find foods with less salt – choose foods with the Keyhole.

In all countries, the campaign was started with a discussion article in newspapers and weekly magazines and is conducted in social media.

There is no formal partnership in Sweden, as reported by Norway, but the industry has taken a number of actions, including:

- working with new Keyhole criteria;
- all retailers (except one) are lowering salt in own-label meatballs and sausages to the Keyhole level by 2016;
- Coop retailer is lowering salt in 100 own-label products;
- a joint action research project (industry, authority, consumer organizations) on developing new techniques for lowering salt levels in especially difficult products and to enhance competitiveness;
- actions by some other companies.

### *Discussion*

There was discussion of whether there are plans to change the recommended intake in the campaign to <5 g per day, in line with the WHO recommendation. The campaign is currently based on the Nordic Recommendations – this will be an issue to look into.

### *Croatia*

Sanja Musić Milanović, National Institute of Public Health, presented the *Croatian Salt Reduction Strategic Plan 2015 – 2019*.

Croatia has the third highest salt intake in Europe (11.6 g per day) according to a national 24-hour urine collection study. Stroke is the second leading cause of death in Croatia and the cost of blood pressure reducing drugs in 2013 was 92 million euros.

The *Croatian Salt Reduction Strategic Plan 2015 – 2019* was adopted in September 2014. Its mission is (a) to increase public awareness of the optimal salt intake and its impact on health via public campaigns and intersectoral cooperation and (b) to change health habits of Croatian citizens and ensure prerequisites for all public domains to choose and consume food with lower salt content.

The plan aims to gradually reduce salt intake among Croatian citizens from the current 11.6 g / day to 9.3 g / day by 2019, to achieve a 30% reduction in salt intake by 2025, and to reach the WHO recommended daily intake of not more than 5 g day.

A multisectoral working group is responsible for development, implementation, monitoring and analysis.

The Croatian Food Agency is defining targets for certain groups of food. Target levels have been defined for some bakery products, aimed at reducing the contribution of these bakery products to salt intakes. Goals are also being set for dairy, meat products and other types of food – prepared foods, snacks, spices and additives.

Obligatory labelling of salt content on food products has been introduced. The possibility of introducing a new regulation setting a reduced tax rate on lower salt products (and also on high fat/sugar products) is under discussion with different government departments. Other actions under discussion include reducing the amount of salt in ready-to-eat foods and restaurant meals and stimulating food companies to reduce the amount of salt added to food.

A major food manufacturer has already decided to reduce salt content of sandwiches sold in vending machines. An issue that has arisen is who should pay for the analyses to check salt levels? To date, the industry has taken on this cost. Some companies are already convinced that, in due course, only healthy living label products will be allowed in vending machines.

Actions directed at citizens included in the plan aim to reduce the amount of salt in ready-to-eat food and school kitchens, encourage consumption of foods with low salt contents and raise awareness of the impact of excessive salt intake on health.

A number of risks have been identified (e.g., lower salt products being more expensive, less tasty or less safe; reducing salt intakes leading to reduced iodine intakes) and for each a counter-action has been identified.

The expected results of the strategic plan include a 20% reduction in salt intake by 2020, along with a 2 mm Hg fall in average blood pressure. The potential savings for Croatia of a 3 g reduction in average daily salt intakes could include €6.14–21.49 million in treating hypertension, between 3,100 and 6,200 fewer new cases of cardiovascular disease, and between 2,300 and 4,700 fewer deaths every year.

### *Discussion*

There was discussion of the different ways to engage with industry to encourage and help with salt reduction. Israel, for example, organized a food technologist and nutritionist team to visit companies – they had really been able to help companies substantially reduce salt levels on a voluntary basis. An alternative is to use a mandatory approach, where necessary, and change the permitted salt levels in product standards.

It was pointed out that the calculations on potential savings for Croatia could be strengthened by adding the figures on the potential loss of productivity. This could help the Minister of Health make the case for the new regulation establishing different taxation rates.

The network secretariat and/or members might have useful information or tools to help convince industry to make changes.

## **Session 2: Moving from salt to other nutrients**

### **Reformulation initiatives in the EU**

Stephanie Bodenbach, DG SANTE, European Commission, gave an update on recent developments at the EU level.

The EU High Level Group started to work on salt in 2008 and since then, there has been the EU Salt Reduction Framework and the Commission published a report on its implementation.

Given the many changes in government and the expansion of EU membership since 2010/11, along with the arrival of the new Commissioner, a questionnaire was sent to High Level Group members in June 2015. The aim is to obtain a comprehensive, up-to-date overview of Member States' national initiatives on selected nutrients and on salt. The results will inform the development of EU action to support Member States and will help the Netherlands to prepare its 2016 presidency and conference on improving product composition in February.

The Commission considers it is important to understand Member States' views on reformulation, and, specifically, in relation to sugars. In particular, do Member States want to reduce sugar levels in order to reduce energy or to cut sugar levels in themselves? Are they taking action on energy, fat and sugars together, or as single elements? Should the strategy aim to reduce sugar levels while maintaining sweetness at current levels? Or should the focus be on changing taste preferences? It is important to get the views of the Group in order to be able to develop a clear strategy.

An expert meeting on reformulation in February 2015 reviewed and updated the reformulation questionnaire and agreed to do a literature review on products aimed at children. It was also agreed that it is important to improve monitoring of the Framework annexes. A new study will look at monitoring the implementation of the existing and upcoming annexes of the Framework from 2017 to 2020. The Joint Research Centre has compared levels of different nutritional elements in food categories in pre-school and school environments.

In addition, a study with DGs AGRI, MARKT and GROW on intra-EU trade of bread, milk, dairy products (including cheese), meat and meat products and ready meals is in the pipeline. This would help with understanding of the impact of reformulation efforts on intra-EU trade.

Currently, Member States are working together on a Joint Action on the childhood obesity action plan. In the same way Member States could potentially cooperate, with the Joint Research Centre, on a Joint Action examining nutrient levels in different food categories and other data for setting targets and monitoring.

### *Discussion*

There was discussion of the main sources of fats and sugars in the EU diet. For saturated fat the main sources are dairy products, meat products and processed foods. For sugars, the detailed picture is not yet clear and further work is being done. The Commission will discuss with Member States which food categories they want to target – based on which categories are big contributors to intakes and also, pragmatically, categories in which change should be possible to bring about.

### **Netherlands – Update on national agreement and EU action on reduction of salt, saturated fats and calories**

Letteke Boot, Ministry of Health, Welfare and Sport, gave an update on developments in the Netherlands.

Reformulation efforts in the Netherlands began with a self-regulation task force on fats, and a task force on salt was established in 2007.

An Accord has been established on Improving Product Composition that aims to make the healthy choice the easy choice by improving production composition, reduction of salt, saturated fats and calories (sugars). The Accord's ambitions for 2020 are consumer intakes of not more than 6 g per day of salt and for it to be easier for consumers to consume no more than 10% of their dietary energy from saturated fats and to reduce their calorie intake. The partners in the Accord are industry sector associations, supermarkets, caterers, restaurants and the Ministry of Health. The process is a stepwise approach that will include proposal of targets by the industry, review by a scientific committee for feasibility and level of ambition, and then submission to a Steering Group of sector group CEOs for approval. The process is transparent and the actions and results will be public and shared through a specific website. Standards have been set for salt in canned vegetables, meat (salt *and* saturated fats), soups and sauces. Targets have also been set for sugar in dairy products and for calories in soft drinks. During 2015, standards should be set for cakes/biscuits, meat products (salt), savoury snacks (salt) and canned vegetables (sugar). A monitoring mechanism has been introduced which gathers data without compromising commercially confidential information.

In relation to considerations about how to choose which nutrients to target with reformulation there are a number of issues to consider. It is important to understand public attitudes. Are all the nutrients relevant for public health? How can we prioritize? Is it better to try to change the formulation for several nutrients at once or to tackle them one by one? It is important to recognise that changing products demands investment, in terms of time and money, of manufacturers. It is also important to be aware of the differences between big multinationals and small and medium enterprises.

#### *Healthy product improvement at the EU level*

The existence of different national reformulation initiatives is a cross-border issue for international food businesses. The Netherlands has chosen to make this a priority issue for its forthcoming presidency of the EU. While different contexts within the EU need to be recognized, reformulation efforts across the Union could be stronger.

Work is underway to create an overview of the current state of play. This will include:

- the questionnaire sent out by the Commission (see above);
- a comparison by the Dutch national public health institute, RIVM, of the composition of a variety of products (that are substantial sources and important for cross border trade) in different Member States;
- comparison of different criteria used for products (e.g., maximum levels) and labelling in Member States;
- insight into the amount of intra EU trade (using visualization/infographics) .

For the remainder of 2015, the intention is to explore Member States' ideas on concerted action to help create a level playing field for product improvement. Also in 2015, the Dutch Health Council's new dietary guidelines will be released and a 24-hour urine collection study will be conducted, for publication in 2016.

It is hoped that the Netherlands Presidency in the first semester of 2016 will be able to come up with some actions to improve concerted action on reformulation within the EU. By working together it should be possible to improve product composition.

#### *Discussion*

In response to a question, Letteke Boot clarified that the Netherlands is considering using the WHO nutrient profile model in the future.

Under the Netherlands' approach, companies choose the nutrient/food product to work on. How does the system ensure that companies do not choose products that are not their biggest sellers? In fact, the scientific committee advises on this issue and their focus is very much on the biggest selling products. Dairy industry analyses have shown, for example, that Gouda accounts for 80% of the cheese sold in the country. Not all other sectors are as transparent with their data.

### New criteria for the Keyhole

Anette Jansson, Swedish National Food Agency, gave an overview of recent developments in the Keyhole labelling scheme in use in Sweden, Norway, Denmark and Iceland. The scheme has gone through various evolutions over the years, with the addition of new food groups in 1989, 2005 and 2009 and introduction of some new criteria.

On the occasion of the 25<sup>th</sup> anniversary of the voluntary, free of charge scheme in 2014, an industry survey was carried out, asking about the impact of the Keyhole scheme on new product development. Companies responded that they do take the Keyhole into account when developing new products.

In 2015, 33 new food groups were added. In addition, salt criteria were defined for every relevant food group. New criteria were added for gluten free and lactose free and unpacked bread, cheese and meat were included for the first time. As were nuts, gravy and dressing.

The salt levels for different food groups were set as follows:

Soft bread	- maximum salt 1.0 g/100 g
Cheese	- maximum salt 1.6 g/100 g
Breakfast flakes and muesli	- maximum salt 1.0 g/100 g
Fat spreads	- maximum salt 1.1 g/100 g
Sausages	- maximum salt 2.0 g/100 g
Ready meals	- maximum salt 0.8 g/100 g, but a maximum of 3.5 g per portion
Pizzas	- maximum salt 1.0 g/100 g
Soup	- maximum salt 0.8 g/100 g, but a maximum of 2.5 g per portion
Dressings of oil and vinegar	- maximum salt 0.8 g/100 g

The new criteria apply to the scheme in all participating countries. An explanation of the new criteria is available in English.<sup>9</sup>

Anette Jansson also told the meeting about new Swedish food-based dietary guidelines, which, in addition to health and nutrition, take environmental considerations into account. The document *Find your way to eat greener, not too much and be active* is also available in English.<sup>10</sup> For the discussion on the development of the guidelines, the

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<sup>9</sup> See <http://www.norden.org/en/news-and-events/news/keyhole-milestone>

<sup>10</sup> Find your way to eat greener, not too much and be active.

<http://www.livsmedelverket.se/globalassets/english/food-habits-health-environment/dietary-guidelines/kostrad-eng.pdf?id=8140>

National Food Agency also prepared a report on risks and benefits. This report is also available in English on request.

### *Discussion*

There was discussion of the relative merits of expressing salt content per 100 g or per typical portion. In fact, for the Keyhole scheme the idea is that consumers do not need to look at the detail of salt content – they can be reassured by the fact that the product carries the Keyhole. Surveys show that 80% of consumers think that the Keyhole is a good way to find healthier products in store.

## **Session 3: Research projects**

### **Food reformulation in the Netherlands: monitoring and studies**

Liesbeth Temme, National Institute for Public Health and the Environment (RIVM), presented an overview on the monitoring of reformulation foods and some related studies in the Netherlands.

The Minister of Health wrote to the food industry in 2012 setting out the case for reformulation, and stating that if progress were not made with voluntary reformulation legislation would be introduced. The letter also included a commitment to support food producers with knowledge and monitoring.

The first monitoring of reformulation of foods, introduced in 2012, focused on sodium and saturated fatty acids. In 2014 the Accord on improving product composition was signed, targeting a maximum 6 g per day salt intake for consumers eating according to dietary guidelines, along with a maximum of 10% of energy from saturated fat, and reductions in energy, sugar, fat, and portion sizes, along with increased fruit and vegetable consumption.

The aim of the monitoring project is to monitor salt (sodium), saturated fat, and sugars (mono- and disaccharides) contents of processed foods on the Dutch market between 2011 and 2014, for foods contributing more than 3% to respective daily intakes. It was designed to make use of the existing databases and monitoring structures. A number of steps were required to set up the monitoring – including, among others, identifying the food groups important for daily intake and defining reference values per food group, then collecting most recent data from industry and the food safety authority and comparing with the reference data.

Reports were delivered to the Ministry of Health in 2012 and 2014. The results suggest a reduction in salt levels in bread (loaves) and cheese spreads, but relatively static salt levels in luxury breads, bread replacements and cheese. There were no significant changes in other major food groups: meat (products), snacks (except potato chips, down 30%), sauces, soups and pastry. There were statistically significant changes in processed pulses/vegetables. It will be interesting to see whether the drop in salt in bread is reflected in the 2015 24-hour urine excretion data.

Further work in 2015 will include country comparisons of current salt, saturated fat and sugar contents in a number of food categories (Finland, France, UK, Italy, Slovenia and the Netherlands).

In addition to the monitoring, modelling studies have examined the effect on sodium intake if processed foods are reformulated as far as technologically possible (maximum reformulation scenario) and compared this with what would happen if people chose a



similar food with the lowest levels of sodium (substitution scenario) (Table 1).<sup>11</sup> The intake data (based on consumers only) show the results depend on the category. If all bread were reformulated as far as possible the median reduction in sodium intake would be 49% for bread eaters. For canned vegetables, the median reduction of 48% in sodium intake is much less than the 87% reduction that could be achieved if those consumers chose fresh vegetables instead. In soups and potato chips, however, the potential reduction from maximum reformulation is much greater than that which would be obtained from switching products.

**Table 1 Sodium reduction strategies and estimated effect on intake of consumers**

Scenario	Reference		Max reformulation		Substitution	
	%consumers	Sodium intake	Sodium intake	Median reduction (%)	Sodium intake	Median reduction (%)
Bread	99	651	332	49	370	43
(semi) hard cheese	73	241	120	50	126	48
Canned vegetables	40	67	35	48	9	87
Soups	27	505	283	44	429	15
Potato chips	41	147	85	42	1	99

Modelling has also looked at the effect on iodine intake of reduced salt levels in bread.<sup>12</sup>

A study with Wageningen University and TNO looked at the effect of lunches with reduced-sodium foods on 74 students. It examined the impact on consumer acceptance, sodium intake during lunch and 24-hour urinary sodium excretion of two different lunch buffets. One buffet included reduced salt (30-60% reduction) versions of 19 foods.<sup>13</sup> The results show significantly lower sodium intake per lunch (~ 1,000 mg) and daily sodium excretion (~ 900 mg) in the group allocated to the lunch with lower sodium foods. This suggests that the reduced sodium foods did not trigger people to eat more salty foods later in the day (sodium compensation behaviour).

### *Discussion*

The monitoring system relies on data submitted by food companies and there was discussion as to whether this entails a risk of bias. Do companies submit data on their more favourable products? The system does not really address this issue but data could be validated against food composition tables. Elsewhere, there has been difficulty in getting compositional information on branded food products. In food composition tables, the availability of information on branded products varies from one food category to another.

<sup>11</sup> Nutritional impact of sodium reduction strategies on sodium intake from processed foods. Hendriksen MA, Verkaik-Kloosterman J, Noort MW, van Raaij JM. Eur J Clin Nutr. 2015 Mar 18.

<sup>12</sup> Reduction of salt: will iodine intake remain adequate in The Netherlands? Verkaik-Kloosterman J, van 't Veer P, Ocké MC. Br J Nutr. 2010 Dec;104(11):1712-8.

<sup>13</sup> Reduced-Sodium Lunches Are Well-Accepted by Uninformed Consumers Over a 3-Week Period and Result in Decreased Daily Dietary Sodium Intakes: A Randomized Controlled Trial. Janssen AM, Kremer S, van Stipriaan WL, Noort MW, de Vries JH, Temme EH. J Acad Nutr Diet. 2015 Mar 11.

The findings of the school lunch study are very important, since they point to the effectiveness of reformulation strategies to reduce salt intakes. Further information is available on the website.<sup>14</sup>

### Social inequalities in salt consumption

Francesco Cappuccio, WHO Collaborating Centre at the University of Warwick, UK, presented an overview of understanding of social inequalities and salt.

A study comparing existence and implementation of salt initiatives between countries in Europe found that richer countries (those with higher levels of inequality-adjusted human development) are much further ahead in tackling salt reduction.<sup>15</sup>

An analysis of UK data from the 2001 national dietary survey – which assessed salt intake by both seven day diary and 24-hour urinary sodium excretion – looked at the distribution of salt intake by geography and by social gradient adjusted for geographic variation. Once geographic variation was allowed for, a social gradient in salt intake remained – salt intakes were higher in people with lower socio-economic status.<sup>16</sup>

Following a 10-year national salt reduction programme, average salt intake in the UK fell by 1.4 g per day between 2000 and 2011, resulting in at least 9,000 deaths being averted. Analysis of the 2008-2011 dietary survey, based on four-day diaries, found that the geographic variation remained and a social gradient is still detectable after adjusting for the geographic variation – even though all groups had reduced their sodium intakes.<sup>17</sup> The programme has therefore reduced average salt intake and has not widened socio-economic inequality, but has not reduced inequalities.

Geographic and socioeconomic gradients in salt intake (as measured by urinary sodium excretion) were assessed in a nationally representative sample of Italian adults. Preliminary results suggest that there is geographical variation (intakes far higher in the south) and that, when geographic location is allowed for, a socio-economic gradient (whether defined by education or by occupation) exists.

It is crucial that the socio-economic patterns of salt intake be taken into consideration and monitored in national salt initiatives. Suitable amendments should be introduced to available policy models to narrow the socio-economic gap. It is important to ensure, for example, that reformulation occurs more often and to a greater degree in foods that are consumed more frequently by lower socioeconomic groups.

### Discussion

There was in-depth discussion about the methodology for assessing salt intakes, particularly where national food composition tables have poor quality information on

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<sup>14</sup> For more information see [http://www.rivm.nl/en/Topics/W/WHO\\_Collaborating\\_Centre\\_for\\_Nutrition](http://www.rivm.nl/en/Topics/W/WHO_Collaborating_Centre_for_Nutrition)

<sup>15</sup> Rodrigo Rodriguez-Fernandez, Margarida Siopa, Sarah J Simpson, Rachel M Amiya, Joao Breda and Francesco P Cappuccio (2014). Review Article. Current salt reduction policies across gradients of inequality-adjusted human development in the WHO European region: minding the gaps . *Public Health Nutrition*, 17, pp 1894-1904. doi:10.1017/S136898001300195X.

<sup>16</sup> Spatial variation of salt intake in Britain and association with socioeconomic status. Chen Ji, Ngianga-Bakwin Kandala, Francesco P Cappuccio. *BMJ Open* 2013;3:1 e002246 doi:10.1136/bmjopen-2012-002246.

<sup>17</sup> Chen Ji, Cappuccio FP. Socioeconomic inequality in salt intake in Britain 10 years after a national salt reduction programme. *BMJ Open* 2014;4:8 e005683 doi:10.1136/bmjopen-2014-005683.

salt. Ideally, there should be at least some 24-hour urinary excretion data. A pragmatic solution is to invest in an add-on module of urinary excretion data in part of the sample (stratified by region), which can then be used to validate food composition data/dietary diaries.

In relation to gender, there does not appear to be any interaction between gender and socioeconomic status.

It will clearly be important to identify those products most commonly consumed by lower socioeconomic status groups. There was discussion of the most effective way to identify such products. This will be an area of further work.

There was also discussion of how to target salt reduction campaigns to ensure that they reduce inequalities. Under-regulated sectors, such as low-cost fast food outlets, could be targeted.

Francesco Cappuccio clarified that the studies were carried out on existing data, and no questionnaires were used. There were no data, therefore, on the contributory factors that might influence different social groups' food choices. There is evidence that price is a driver of food choice, but there will clearly be other determinants. More generally, behavioural change campaigns have often been seen to widen inequalities.

There are clearly important policy implications of this work. It will be important to have similar work conducted in other countries to be able to have a pan-European analysis of these issues.

### **New approaches for salt reduction in food**

Dominic Wimmer, Fraunhofer Institute for Process Engineering and Packaging, Germany, presented some research and development work on new approaches to salt reduction.

A number of different strategies have been explored to reduce salt: step-by-step reduction; use of salt substitutes; salt enhancers (e.g., umami), multisensorial interaction and unequal salt distribution.

A two-year project at the Fraunhofer Institute is experimenting with multisensory interactions and distribution of salt with the aim of reducing salt in sausages by at least 30-40% without diminishing the taste. The salt content of sausages is usually between 1.2 and 5%, and, functionally, salt in sausages is generally used as nitrite pickling salt.

A large proportion of the salt in a product does not reach the taste buds, so the project is exploring how to distribute the salt in the sausage in a way that it reaches the taste buds. Salt is not distributed homogeneously, and most of the salt in the sausage is in the fat, and the rest is in gaps in the protein network.

The project produced 'salt islands' – small areas of meat with higher salt concentration – and found that this successfully increased the salty taste. However, there is salt migration (from the 'salt islands' to the lower salt sausage meat) over several hours. This approach, therefore, is challenging for sausages, but could be very promising for dry matrix products, such as bread.

The project is also going to explore how basic stimuli – such as texture and colour – can interact to enhance saltiness. It is also looking at whether incorporation of natural flavours and spices that have the potential to enhance a salty taste.

Research has found that the presence of a 'salt reduced' claim can influence consumer perception of salt. In the presence of a reduced salt label, 80% of panellists were not able to successfully identify which products were saltier – people thought the reduced salt labelled products were less salty irrespective of whether they actually were. This has implications for policy on labelling.

### *Discussion*

The issue of the cost implications of a lower salt sausage was raised. Dominic Wimmer considers that the product will not necessarily be more expensive once the right solution is found and the technology can be scaled-up.

There was discussion of the policy implications of the finding on labelling with 'reduced salt'. While there may be a case for not labelling with reduced salt, there is also the question of helping consumers to make choices.

## **Session 4: Working group on salt in bread**

The fourth session included a report back on the working group on salt in bread, and findings of bread monitoring in Switzerland.

### **Bread monitoring in Switzerland**

Michael Beer, Food Safety and Veterinary Office, reported on a bread monitoring initiative in Switzerland. Inspired by the Greek experience with craft bakers, first reported at a previous ESAN meeting, Switzerland set out to measure the salt content of white and brown bread originating from craft bakeries and to develop recommendations for craft bakeries on how to reduce salt.

Sodium content was measured in a study of 335 samples from 182 bakeries from the 19 Swiss cantons and the Principality of Liechtenstein. The mean salt content was 1.5 g / 100 g (ranging from 1.25 to 1.67 g / 100 g) compared to the goal of 1.4 g / 100 g. There will now be follow up with individual bakeries to get those at the higher range to reduce salt levels by showing them how they compare with others and helping them to understand the different processes that can be used. In terms of regional variations, the differences were not too wide, and not as big as had been expected.

Given the problems with iodine intakes in Switzerland, the study also looked at use of iodized salt. Care needs to be taken to ensure that a big drop in salt use does not exacerbate this issue. The results show that 86% of the bakers surveyed were already using iodized salt. One challenge is a common belief that use of iodized salt means that products cannot be exported. This does not really appear to affect craft bakers.

In general, the results were better than expected but further progress is needed. This type of study provides an excellent opportunity to engage with the craft bakery industry. An update on the results of this engagement will be presented to the network at a future meeting.

### **Bread working group: Report**

Establishment of a working group on bread was proposed at the ESAN meeting in London in 2011. The objectives of the working group are to:

- create a simple tool to share knowledge about salt reduction in different food categories among ESAN members;
- have all available information on a specific type of food in one place;

- see what other countries have done, e.g. what works and what does not;
- work towards the same target level in one food category.

The group developed an Excel tool, presented to the ESAN meeting last year, and this has been piloted in Austria, Greece, Ireland and Switzerland. The tool has since been simplified with some improvements to formatting, changes to bread definitions, and a reduction in the amount of information requested.

In Spring 2015, 12 countries<sup>18</sup> participated in a survey using the tool. The survey confirmed that for maximum salt levels in bread some countries have legislated while others are using a self-regulatory approach.

The preliminary results (some data still to be added) for brown bread (Figure 4) and white bread (Figure 5) are shown. Target levels vary considerably – for brown bread, for example, they range from 0.7 g to 1.5 g per 100 g fresh bread – and it would be helpful to discuss possible harmonization across Europe. The results show some improvements have been achieved, but these are not on the scale of the 20% reductions that are said to be technically possible. There are no real differences in the target levels set for white bread and brown bread, although technically it should be possible to aim for lower levels in brown bread.

Figure 4 Salt in brown bread (g/100 g fresh bread)

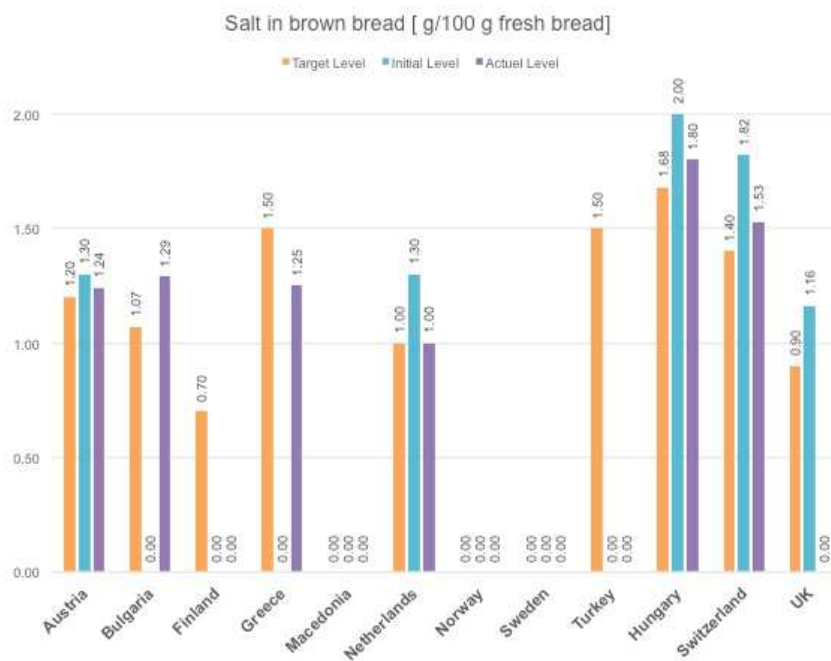
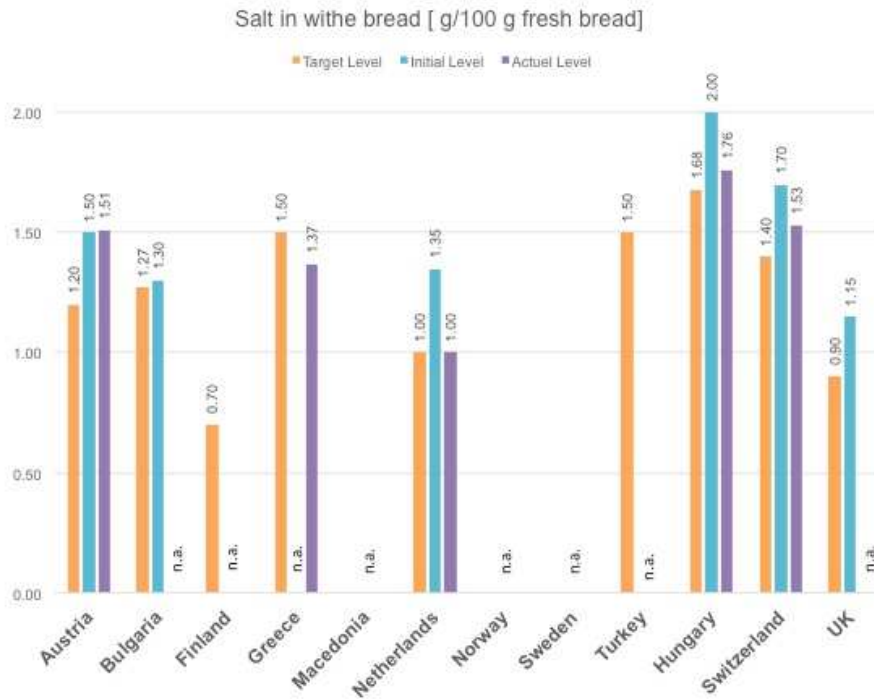


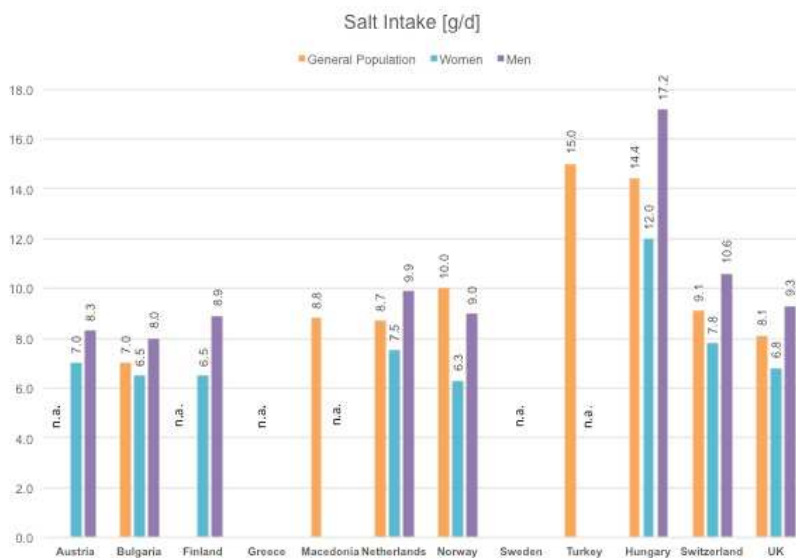
Figure 5 Salt in white bread (g/100 g fresh bread)

<sup>18</sup> Austria, Bulgaria, Finland, Greece, Macedonia, Netherlands, Norway, Sweden, Turkey, Hungary, Switzerland and the UK.



The results also support the argument that countries with higher salt levels in bread have higher population intakes of salt (Figure 6), thus validating the approach of reducing salt in bread.

Figure 6 Salt intakes in the general population, women and men



The full results will be made available to ESAN members on the member-only website during summer 2015. The data quality will then be improved and there will be attempts to increase the number of participating countries, so that Switzerland will then compile an updated summary report for the next ESAN meeting in spring 2016. The final goal is still to be able to collect data over time and to be able to produce maps showing progress across countries.

The network Secretariat proposed to develop the tool for one or two products in another food category, such as meat products (e.g., ham). It was agreed to develop a more detailed proposal and to pilot test this in three or four ESAN countries to determine whether sufficient data are available.

In this way, it is hoped that the network will be able to identify how and why some countries are successful with salt reduction. It remains a key challenge that tastes differ across Europe. Ultimately, the three-fold difference in salt levels between similar products in different countries should be able to be eliminated. The network, therefore, should be working towards some degree of harmonization. To this end, a database of salt levels will help in sharing knowledge and in supporting work towards the same target levels in food categories.

### *Discussion*

It was suggested that it would be very valuable to publish the results of the survey work. The data needs to be improved, and country participation increased, before publication. WHO would be happy to help encourage more countries to participate.

There was support for the idea of modifying the tool for use in other food categories. The Netherlands, Finland, Hungary, Norway and Greece indicated that they would be willing to participate in the piloting of the tool on meat products. It is recognised that initial salt levels are the most difficult area in which to obtain data.

It was suggested that it is important for the project to focus on major dietary sources of salt and on products that are marketed in many Member States but can be customised with different salt levels in different countries (e.g., major restaurant chain fast food meals). The Secretariat will try to identify a list of the most significant products in each country and those products traded across Europe and will circulate to those countries prepared to get involved in the piloting.

It was agreed that price/cost of item would be included in the tool, and that this would enable monitoring in any changes of price following reformulation.

### **Session 5: WHO sugar guidelines**

Jo Jewell, WHO Regional Office for Europe, described the process for developing WHO guidelines, using the new WHO sugar guideline<sup>19</sup> as a case study, and outlined the opportunities and challenges for cutting sugar intakes.

The process of developing guidelines falls within one of WHO's core functions of setting norms and standards. A very clear process for developing Nutrition Guidelines, established in 2010-11, involves key nutrition stakeholders and expert panels, the WHO Nutrition Guidance Expert Advisory Group (NUGAG) and the WHO Guideline Steering Committee. The GRADE (Grading Recommendations Assessment Development Evaluation) methodology clearly separates out the quality of the evidence and the strength of the recommendation. The strength of the recommendation takes into account the quality of evidence, the balance between desirable and undesirable effects, values and preferences, and costs.

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<sup>19</sup> World Health Organization. Guideline: Sugars intake for adults and children. Geneva: World Health Organization; 2015.

Against the backdrop of concerns about the poor quality and the high energy density of diets, obesity, NCDs and dental caries, the previous WHO guidance on sugars (less than 10% of dietary energy) dating back to 2003 required updating.

Two systematic literature reviews were commissioned to assess the effects of increasing or decreasing intake of free sugars on body weight and dental caries. The term ‘free sugars’ includes monosaccharides and disaccharides added to food by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit concentrates.

The key findings in relation to body weight were:

- Meta-analyses of randomized controlled trials (RCTs) in adults suggest an association between *reduction* of free sugar intake and reduced body weight;
- RCTs in adults that involved *increased* intake of free sugars also identified a comparable increase in body weight;
- The effect on body weight operates primarily through the mechanism of influencing overall energy intake;
- Confirmation of a link between increased intake of free sugars in the form of sugar-sweetened beverages (SSBs) and weight gain in children.

The key findings on dental caries were:

- Cohort studies in children suggest a positive association between free sugar intake and dental caries;
- Lower levels of dental caries observed in national population studies when per capita intake was less than 5% total energy intake;
- Positive associations between free sugar consumption and dental caries detected in all age groups, both children and adults.

WHO issued a strong recommendation, therefore, to reduce intake of free sugars throughout the life course and recommends that, in both adults and children, intake of free sugars does not exceed 10% of total energy. For countries which currently have low free sugar intakes, levels should not be increased. A further conditional recommendation was issued for a further reduction to below 5% of total energy. Further information and explanation is provided in the guideline document.

There are a variety of policy options available for translating these recommendations into concrete policy action. Specifically in relation to reformulation there are a number of approaches:

- *Reducing the amount of sugar without replacing it (making the products less sweet)*: There has been some progress, but there are also technical issues where sugar contributes to food texture and volume.
- *Use of sugar replacements or substitutes*: There are some concerns about the use of non-sugar, non-caloric sweeteners (taste, consumer acceptability, no impact on consumer preferences for sweetness).
- *Reducing energy density or portion size*: Adding water, air or fibre can reduce the energy density and reformulating the size of the foods offered could lead to reduced sugar intakes. Doing both together could have a greater impact.

The focus of the work should be on food categories that contribute most to added sugars and energy intakes. Possible approaches to reducing sugar levels include setting



progressive targets to enable incremental reduction and/or reducing portion sizes. It can be useful to look at those products that do achieve low sugar levels (e.g., those with a green ‘traffic light’ for sugars on front-of-pack labelling) for inspiration on what is achievable.

The different technical functions claimed for sugar are often cited as a challenge for reformulation to reduce sugar levels. Other potential challenges include consumer acceptance, price effects and substitution effects (e.g., if reformulation replaces sugar with fat and increases energy density). Other challenges include poor availability of food composition data and lack of clarity about the free sugar content of foods. Manufacturers and retailers should have the information on free sugar content and an alternative methodology for calculating free sugar content exists.<sup>20</sup>

WHO is keen to hear about national experience on reformulation to reduce sugar levels or portion size.

### *Discussion*

It is now time for this Guideline to be implemented and Member States should be working towards the 10% figure in the first instance. This strong recommendation from WHO should be translated into national food-based dietary guidelines and policy options explored. There are currently, however, pressures in the market that favour increased consumption of sugars.

The intense interest in the sugar guideline – from the industry, media, and general public – has shown that WHO should engage in proactive communication with Member States in relation to ongoing guideline development and prior to publication.

In relation to reformulation to reduce sugar levels, it appears that this will pose more challenges than has been the case for salt. For some food categories (e.g. sugar-sweetened beverages) Member States may place more emphasis on dietary advice to reduce or avoid consumption, while for other categories, such as breakfast cereals, reformulation will be more important. Member States face challenges in how to deal with sugar substitutes and whether to recommend them, despite concerns about their impact on obesity and taste preference, and high intakes in some groups. Long-term changes to dietary preferences – in relation to both salt and sugar – are important, and these need to be brought about by reformulation since consumer educational efforts are only likely to widen inequalities.

A problem with the lack of data on added sugars in food composition tables was highlighted. Furthermore, to be able to tackle this issue it is important to have information on which food groups are the biggest contributors to sugar intakes. There is also considerable confusion about the terminology in relation to sugars.

It is important to bear other policy options for reducing sugar in mind. Fiscal policy is one such option. Finland, for example, is putting a tax on all bottled drinks for health and sustainability reasons, but the tariff is twice as high on sugar-sweetened drinks. It is likely that a mix of different policies will be required to reduce sugar intakes.

WHO has prepared a briefing paper on implementing the sugar guideline and clarifying the terminology. This will be available for Member States soon.

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<sup>20</sup> Bernstein and L’Abbe, 2015

## Discussion on next steps and future development of ESAN

### Possible expansion of the ESAN remit

Following the presentations covering reformulation in relation to other nutrients, there was a discussion on whether the remit of the network should be expanded to cover other nutrients/ingredients. Given that all countries have a problem with salt intakes and that a great deal more progress is required, it was agreed that salt should stay the primary focus of the network. It was recognized, however, that salt reduction does not take place in isolation, and it is interesting for the network to consider other issues related to reformulation while retaining the emphasis on salt.

There was also discussion about whether, and to what extent, the network should consider issues relating to the balance of sodium and potassium in the diet, including how potassium intakes can be increased and the risks/benefits of fortification. Related issues that it would be valuable to discuss include use of salt replacements/ alternatives and different types of salt. It was agreed that these issues should feature on the agenda of a half-day session during the next meeting.

Other issues identified that would be interesting to discuss include salt and iodine intakes, how to establish a unified approach across Europe, and relative merits of a regulatory versus a self-regulatory approach.

It was agreed that the ESAN Terms of Reference would be amended to reflect a slightly expanded remit – while maintaining a primary focus on salt reduction – and the Secretariat will circulate proposed revised Terms of Reference for review.

### Discussion about possible joint projects

There was a discussion about the possibilities of working together or collaboration to mobilize resources for research.

#### *Harmonization measurement and comparable data*

The network and WHO have already developed tools (e.g., a protocol for 24-hour urine collection and analysis) to help with measurement methodology that Member States can tailor and adapt to their needs. These tools are in use and having an impact, but there is also a need to improve dissemination of these tools. There was also discussion of the need to ensure harmonization with EFSA and EU methodology.

It was pointed out that addition of a sodium module to a national dietary survey improves the measurement but does not infringe any EFSA rules. In order to minimise the costs, it is possible to measure the 24-hour urinary sodium excretion of a small sample in order to obtain an average intake. If the data is *only* used for that purpose – and not as a measure of individual intake or for any other epidemiological use – the measurements can be taken on hundreds, rather than thousands, of samples. Although each country needs to do their own calculation on sample size, in general, inclusion of about 200 samples per strata would be adequate to detect a considerable change over a five-year period.

#### *Joint research projects*

A Joint Action, led by France, is currently being finalized to look into factors influencing food choice and the concentration of sugars, salt and saturated fat in different food groups across several countries. This pilot action involves four countries involved in ESAN (France, Austria, Slovenia and Ireland).

A number of ideas for possible collaboration on joint research proposals were suggested:

- *Salt and inequalities*: A study to bring together all existing data and to particularly examine the issues around salt, socioeconomic status and inequalities. This could involve the three WHO Collaborating Centres and build on Professor Cappuccio's previous work on this issue. It was suggested to work on developing a research project proposal, which could then potentially be submitted for possible funding.
- *Salt, soft drinks, sugars/sweeteners and obesity*: There is a case for exploring the links between salt and – through its impact on thirst – consumption of soft drinks and, thus, on child obesity. Studies show that reducing salt intake could lead to a consequent drop in fluid intake and sugar-sweetened beverage intake.<sup>21</sup> It was mentioned that it could also be interesting to look at the issues around replacement of sugars with sweeteners and issues around brand cross-promotion (indirectly promoting regular versions of soft drinks by promoting low-sugar versions).

#### *Exchange with the EU High Level Group*

It was suggested that it would be interesting to feed the results of the network collaboration on reformulation and research findings into the deliberations of the High Level Group. The network members who are also involved in the High Level Group could explore the possibilities for putting this on the Group's agenda.

## **Conclusions**

Michael Beer thanked all participants for their contributions to a very worthwhile meeting. He encouraged network members to send the Secretariat news of developments in their country. The Secretariat will also invite network members who had not attended the meeting to provide an update. The Secretariat will share all information via the members' website.

Proposals for the next meeting date and venue will be circulated. The aim is, once again, to have a back-to-back meeting with the marketing to children network.

On behalf of all participants he thanked the Greek hosts for their generous hospitality and all the organization, then drew the meeting to a close.

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<sup>21</sup> He FJ, Marrero NM, MacGregor GA. Salt intake is related to soft drink consumption in children and adolescents. A link to obesity? Hypertension 2008;51:629-634.

## Annex 1 List of participants

<b>Registration ESAN Meeting 16/17JUNE 2015</b>		
<b>Country</b>	<b>Name</b>	<b>Organization</b>
Albania	Eralda Mariani	Ministry of Health
Bulgaria	Vesselka Duleva	National Centre of Public Health and Analyses, Ministry of Health
Croatia	Marija Delas	Croatian Institute of Public Health
Croatia	Sanja Music Milanovic	Croatian Institute of Public Health
Croatia	Danijela Stimac	Croatian Institute of Public Health
Cyprus	Eliza Markidou	Ministry of Health
Finland	Sirpa Sarlio-Lähteenkorva	Ministry of Social Affairs and Health
Greece	Georgios Marakis	Hellenic Food Authority
Greece	Antonia Trichopoulou	Hellenic Health Foundation
Hungary	Eva Martos	National Institute for Pharmacy and Nutrition
Ireland	Karl McDonald	Food Safety Authority of Ireland
Israel	Ronit Endevelt	Ministry of Health
Norway	Britt Lande	Norwegian Directorate of Health
Norway	Hilde Skyvulstad	Norwegian Directorate of Health
Norway	Amandine Lamglait	Norwegian Directorate of Health
Sweden	Anette Jansson	National Food Agency
Switzerland	Liliane Bruggmann	Federal Food Safety and Veterinary Office
Switzerland	Michael Beer	Federal Food Safety and Veterinary Office
The Netherlands	Letteke Boot	Ministry of Health, Welfare and Sport
Invited speaker	Francesco Cappuccio	University of Warwick, UK
Invited speaker	Liesbeth Temme	National Institute for Public Health and the Environment (RIVM),

		Netherlands
Invited speaker	Dominic Wimmer	Fraunhofer Institute for Process Engineering and Packaging, Germany
European Commission	Stephanie Bodenbach	DG SANTE, European Commission
WHO	Jo Jewell	World Health Organization Regional Office for Europe
WHO	Liza Villas	World Health Organization Regional Office for Europe
WHO	Joao Breda	World Health Organization Regional Office for Europe
WHO	Temo Waqanivalu	World Health Organization headquarters
Rapporteur	Karen McColl	Consultant