

# *Creating an enabling environment for population-based salt reduction strategies*

Report of a joint technical meeting held by WHO and the Food Standards Agency, United Kingdom, July 2010



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# *Executive summary*

High blood pressure is responsible for 13% of deaths globally. The risk of death from high blood pressure in low- and middle-income countries (LMIC) is more than double that of high-income countries. The amount of dietary salt consumed is an important determinant of blood pressure levels and of hypertension risk. This relationship is direct and progressive with no apparent threshold, and salt reduction in individuals is an important intervention in reducing blood pressure, increasing the efficacy of pharmacological therapies, and reducing the global risk of cardiovascular disease.

In July 2010, the World Health Organization (WHO) and the United Kingdom Food Standards Agency (FSA) jointly convened a technical meeting in London: "Creating an Enabling Environment for Population-based Salt Reduction Strategies." The meeting provided an opportunity for detailed discussion on interventions for consumer education and reformulation of industrially produced foods to enable consumers to make appropriate choices to reduce the total sodium content of their diet.

It was agreed by participants that to achieve an effective reduction of salt intake at country level, governments need to use a multisectoral and multistakeholder<sup>1</sup> approach in creating enabling environments for salt reduction policies. In order to tailor appropriate salt reduction interventions for policy development, knowledge of both salt consumption levels and main sources of salt in the diet is essential. In countries where commercially processed food is the principal source of dietary salt intake, interaction with food producers is necessary in order to develop and achieve realistic salt reduction targets. These countries also need to implement public awareness campaigns focusing on knowledge, attitudes and behaviours regarding salt and health. In countries where the

main source of dietary salt is added during cooking or at the table, or from foods eaten outside the home, interventions need to be aimed at working with the catering sector as well as educating the consumer so that public awareness is increased and can influence changes in behaviour.

These activities involve the collaborative work of various stakeholders: WHO, national governments, nongovernmental organizations (NGOs) and the private sector. Participants concluded that: WHO is instrumental in providing technical support and resources to support action. National governments need to provide leadership for the development, implementation, and monitoring of country-specific salt reduction policies. NGOs, professional associations, and academia also have a significant role to play in advocating change, informing and increasing public demand for reformulated products. The private sector and international food manufacturers have to deliver on commitments for product reformulation and ensure that markets in LMIC benefit from their work to reduce the sodium content of the products which are sold across borders.

Much progress has been made already, and the way forward calls for increased collaboration so that environments enabling safer levels of salt consumption for the prevention of noncommunicable diseases can be created.

This report is a summary of the evidence and experiences presented during the technical meeting, as well as the discussions of the working group sessions and conclusions reached by the participants. It will contribute to the development of the WHO toolkit of population-based salt reduction strategies.

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<sup>1</sup> Definitions are set out in Annex 3 at the end of this document.

# Introduction

Noncommunicable diseases (NCDs) account for nearly 60% of all deaths globally, of which 80% occur in LMIC (1, 2). The World Health Organization projects the number of deaths attributable to NCDs increasing by 17% globally in the next ten years and that this will affect disproportionately the economically disadvantaged (1, 2). High blood pressure is a leading risk factor, causing 51% of stroke and 45% of ischemic heart disease on a global scale. It is estimated that one third of cancers and up to 80% of heart disease, stroke and Type 2 diabetes can be prevented if major risk factors such as smoking, unhealthy diet, physical inactivity and the harmful use of alcohol are reduced or eliminated (1).

The WHO and the United Kingdom Food Standards Agency (FSA) jointly convened a Technical Meeting on 1-2 July 2010 in London entitled "Creating an Enabling Environment for Population-Based Salt Reduction Strategies". It was opened by Dr Ala Alwan, on behalf of WHO, and by Mr Jeff Rooker, Chair of FSA.

This technical meeting is the first of a series of three meetings which WHO will organize with the overall long term objective of producing a toolkit for Member States with practical approaches for effective population-based salt reduction strategies. The second technical meeting, jointly convened by WHO and the Government of Canada in October 2010, will focus on identifying the appropriate tools and protocols for monitoring and evaluating population sodium consumption and sources of sodium in the diet. The third meeting focusing on the role of fortified salt in iodine deficiency prevention will be held in 2011.

Specific objectives of the WHO and FSA jointly convened meeting were to:

- 1.** Review the evidence of interventions that are cost-effective.
- 2.** Review and discuss initiatives, policies and programmes which have been implemented as part of population-based strategies for salt reduction, and to include:
  - national experiences
  - regional experiences
  - successes, failures and lessons learnt
  - identification of how initiatives, policies and programmes can be adapted and adopted for LMIC
- 3.** Review how the framework to monitor and evaluate the implementation of the Global Strategy on Diet and Physical Activity could be used in the context of monitoring and evaluation of salt reduction policies (3).

Participants of the technical meeting included representatives of government agencies, international health and consumer organizations and academics (listed in Annex 1). The detailed programme of the meeting is available in Annex 2 and definitions and abbreviations set out in Annex 3.

# Background

## *Cardiovascular diseases and daily salt intake*

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Cardiovascular diseases are among the leading causes of global mortality and morbidity, and high blood pressure is one of the most powerful predictors of stroke and major cardiovascular events. Although easy to diagnose, high blood pressure remains a “silent killer” and poses a serious public health problem. Studies have shown that more than a third of those affected can be unaware of their condition, which is frequently only discovered in the event of life threatening complications (4). A population salt intake of less than 5 grams per person per day<sup>2</sup> is recommended by WHO for the prevention of cardiovascular diseases. This target is achievable and safe for both adults and children (5, 6).

## *The mandate given to WHO*

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In response to the alarming global increase in noncommunicable diseases, a series of milestone resolutions has been endorsed by successive World Health Assemblies since 2000, giving WHO a strong and clear mandate to work for their prevention and control (7–9). Key mandates guiding the work of WHO in the area of salt reduction at population level include: Resolution WHA57.17: Global Strategy on Diet, Physical Activity and Health (10), and Resolution WHA61.14: Prevention and Control of Noncommunicable Diseases:

Implementation of the Global Strategy and the Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases (11).

WHO organized a forum and technical meeting in October 2006 entitled “Reducing Salt Intake in Populations”. The report from this meeting summarized key issues that need to be addressed when targeting the reduction of salt consumption at population level. As a follow-up, in March 2007 in Luxembourg, WHO organized an expert consultation on “Salt as a Vehicle for Fortification.”

The WHO/ FSA jointly convened technical meeting builds on the experience, knowledge and evidence generated from these previous activities and provides a fundamental contribution to the implementation of Objective 3 of the 2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases, which mandates WHO to promote interventions to reduce the main shared modifiable risk factors for noncommunicable diseases by facilitating healthy choices, and including multisectoral actions (11).

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<sup>2</sup> Definitions are set out in Annex 3 at the end of this document.

# *Salt reduction strategies: the evidence*

Public health policies must be based on scientific evidence that demonstrates that excessive salt intake is a major risk factor to health and that decreasing salt intake can save lives and reduce the cost of health care. The relationship between salt, cardiovascular diseases and stroke has been studied extensively. A detailed review of the scientific evidence has already been included in the 2007 WHO report “Reducing Salt Intake in Populations” (12). The quality of the evidence admissible for Risk Assessment Analysis must be scrutinized along strict parameters, as policies need to be able to withstand challenges from opposing stakeholders. This section will briefly summarize the current evidence presented at the technical meeting.

- There is a dose response and a direct relationship between salt and blood pressure. There is additional benefit if salt is reduced even if the diet is already a “healthy” one (13-15).
- Decreasing salt intake reduces the long-term risk of cardiovascular events and stroke. It is estimated that decreasing dietary intake from 10 grams to 5 grams per day would reduce overall stroke rate by 23% and cardiovascular disease rates by 17% (16-18).
- The risk of stroke trebles between levels of systolic blood pressure that are in the “normal” 120-140 mmHg range, and there appears to be no apparent minimum threshold for diastolic blood pressure which is free from risk (19).
- There is a direct and linear relationship between blood pressure and death from stroke and ischemic heart disease throughout middle and old age. Increasing systolic blood pressure by 20 mmHg, will double the death rate from stroke and ischemic heart disease (20).
- Lowering systolic blood pressure by 10 mmHg can reduce coronary heart disease events by 22% and reduce stroke by up to 41%. This translates to approximately 2.5 million preventable deaths every year (21).
- Reducing salt intake in communities is possible and is one of the most cost-effective and affordable public health interventions. The combined cost for tobacco- and salt reducing measures in low- and lower middle-income countries is estimated at US\$ 0.40/person per year and in upper middle-income countries US\$ 0.50-1.00/person per year. This can avert an estimated 13.8 million deaths over 10 years. Reducing salt intake by 6 g/day in populations equates to approximately 2.5 million preventable deaths globally every year. Voluntary reductions by the food industry would save billions of dollars from health care costs (22-34).

# Implementing a salt reduction strategy: country and regional experiences

A mixture of experiences was presented by a number of participants representing Member States and regional networks. Speakers put the salt reduction programme in context by giving an estimate of the average salt intake in their population, identifying the major sources of salt in the diet and describing the national burden of cardiovascular diseases and stroke.

## *Lessons learnt:*

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- Policies and recommendations have to be supported by sound evidence and need to have clear and justifiable goals which are communicated to all stakeholders.
- Noncommunicable diseases are becoming increasingly important in less economically developed countries as a consequence of the epidemiological transition. More importance must be given to salt reduction by governments and public awareness must be increased in these countries.
- Many countries have a severe lack of data both on national salt intake levels, dietary patterns and on the amount of salt in local food products.
- There appears to be a lack of engagement by health professionals especially in regions where salt is used as a vehicle for iodine fortification. This issue needs to be addressed and resolved.
- Although regulation of the food industry by government should be considered, this should not deflect from the importance of using an integrated approach to engage the food industry.
- Simple and cheap interventions such as the distribution of salt spoons are important and can be effective in changing behaviour and reducing salt added at table.

## *National strategies*

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### **BANGLADESH**

The “Strategic Plan for Surveillance and Prevention of Noncommunicable Diseases in Bangladesh: 2007–2010” (35) stresses the need for salt reduction, however a formal salt reduction policy still has to be developed. Positive development trends are apparent in the country as poverty levels are slowly decreasing and life expectancy is improving, but morbidity and mortality from cardiovascular diseases have increased sharply in the past 20 years. Pilot studies using spot urine samples indicate that salt intake is very high, reaching 16–18 g/day for both rural and urban areas and much salt is added at table. National nutritional guidelines recommend the use of iodized salt and suggest limiting salt intake to 5–10 g/day. However there is very little national data on salt intake as the emphasis of dietary surveys is still focused on detecting malnutrition. Further work is required as monitoring and evaluation need to be strengthened and current legislation covers only the banning of non-iodized salt used for consumption. Furthermore, the private sector is generally unaware of the implications of excessive salt intake on health, but there has been progress in some sectors of the food industry with talks for self-regulation. Other positive steps are being taken: the Bangladesh Standards and Testing Institution has started to publish the salt content limits for some processed foods; the introduction of food labelling is being evaluated; prominent members in academia are developing guidelines and promoting cardiovascular disease reduction; some NGOs are working with the media to increase awareness among the general public and caterers and others are collaborating with WHO and other international organizations to conduct surveys and other research.

**CANADA**

The Canadian Sodium Working Group was formed in 2007, and a Sodium Reduction Strategy was released in July 2010. The Canadian Sodium Working Group includes members from government, NGOs, the scientific community and the food manufacturing and catering industry. The 2004 Canadian Community Health Survey-Cycle 2.2 on Nutrition, which uses 24-hour dietary recall methods, reports a sodium consumption of 3 400 mg/day which is more than double the average intake limit of 1 500 mg/day. Salt is reportedly present in all food groups with bread accounting for 14% of total dietary salt. Targets have been set for a 30% reduction across the whole population over the next 5 years, to reach 2 300 mg/day by 2016. The group intends to address salt in the food supply, raise awareness across all stakeholders, and make recommendations for research. The group will be actively monitoring and reporting the sodium intake in the population, sodium levels in the food supply, morbidity and mortality from all cardiovascular diseases, the effectiveness of the education campaigns and results from conducted research. The critical success factors mentioned for the progress achieved so far include the strong commitment shown by all parties who adopted a consensus-driven and all-inclusive approach.

**CHINA**

A salt reducing campaign was launched in China in 2007. Salt intake in the traditional Chinese diet is reportedly very high and dietary recall studies report a range of 12–20 g/day, with the cold northern parts of the country having the highest consumption. Dietary sources of sodium in the traditional diet have been studied. Over 70% of salt is added while cooking, with the remainder accounted for through the use of soy sauce and salted vegetables. China has adopted several strategies to reduce salt intake. Health promotion and educational approaches encourage people to use less salt while cooking and have introduced the use of a calibrated salt spoon. Regulation for food labelling is being encouraged but remains voluntary. Lower salt alternatives for a few popular foods, especially sausages and salted vegetables, have become available. Research conducted in China on the use of salt substitutes by hypertensive patients concluded that this is acceptable, safe and effective but a large scale and longer-term study will be carried out before this is recommended to the general public. The campaign has received the full support of the highest political leaders of the country and is popular with the public. Although China has made great progress in implementing a population-wide salt reduction strategy, it is to be expected that using one simple strategy will not be enough for this large and diverse country.

**FINLAND**

Salt intake in Finland has been reduced by a third in the past thirty years, as a direct legacy of the North Karelia Project, which was expanded to include the rest of the country

in 1982. The principal source of salt in the Finnish diet comes from bread, meat products and processed foods. Current intake levels based on population surveys are 7 g/day in women and 9 g/day in men. National guidelines recommend a daily intake of 0.5 g sodium chloride for children under 2 years of age, 7 g/day for men and 6 g/day for women. The first national labelling decrees were launched in 1993. Since then criteria for “reduced salt” foods (i.e. 25% less salt than the normal product) and “high salt” foods have been set. A heart symbol logo was introduced in 2000. New standards for procurement by public catering services were developed in 2010. Finland has adopted a multidisciplinary approach, using a mixture of legislation, consumer education, dietary recommendations and new product development. The food industry, nongovernmental organizations and consumer organizations have all played a significant role. Factors contributing to this success include a consensus driven by a health conscious population, strong legislation and cooperation by the food and catering industry. Regular and continuous monitoring has allowed the policies to remain responsive to the continued challenges. Keeping the younger generation, who have no memory of the North Karelia Project, fully engaged could prove to be a new challenge for the future.

**KUWAIT**

Kuwait has a dominant public health care system and has yet to set a population-based salt reduction strategy. Some groundwork has already been covered to study salt consumption and dietary sources of salt. A survey held in 2009 showed that the 19–29 age group consume the most salt and the average intake was comparable to that reported by Canada and the US. The top 10 sources of salt in the local diet have been identified and of note is that 90% of all food consumed is imported. Most salt is added while cooking and not at table. Hypertension is very common and one third of the population is affected. Efforts so far have included national programmes for the prevention of obesity and diabetes among school children and adolescents. Experience gained from the obesity programme has shown that media campaigns are expensive and often short-lived. Other education population campaigns for healthy lifestyles also do not seem to prove effective. Although the Ministry of Health still has to take on the challenge of salt reduction, it is predicted that there could be a significant effect on the food industry once the Gulf Standards Committee becomes involved.

**USA, New York City Department of Health**

The National Salt Reduction Initiative (NSRI) was launched in October 2008 in response to persistent excessive US dietary sodium intake. While calls to reduce salt in US foods date back 30 years, national dietary recall studies estimate average adult consumption currently at 3 400 mg of sodium/day (salt equivalent: 9 g/day), which is well above guidance. US dietary guidelines recommend no more than 2 300 mg sodium/day for

adults and 1 500 mg/day for all persons middle-aged and older, African Americans, and people with hypertension. Coordinated by the New York City Health Department, the NSRI is national in scope. This is to address industry comment that sodium reduction targets should be uniform and not vary by state or local regions. The NSRI now includes 50 partners, including city and state health authorities and leading national health organizations. Based upon the UK salt campaign strategy, the initiative aims to achieve gradual yet substantial reductions in the sodium content of packaged and restaurant foods since they represent 77% of all dietary salt intake. The goal is to reduce population sodium consumption by 20% by decreasing sodium in processed foods by 25% within 5 years. To achieve this, targets for 62 packaged and 25 restaurant food categories were set for 2012 and 2014. Two unique databases were created and will be updated in 2012 and 2014 for the purposes of target-setting and monitoring changes in food sodium content in packaged and in restaurant foods. A 24-hour urinary sodium assessment in a representative sample of New York City residents is currently underway to obtain accurate baseline levels of population sodium intake. It will be repeated in 2014 to determine NSRI impact. This voluntary, interactive, national approach to target-setting with the food industry, coupled with a data-driven monitoring infrastructure, has led to a landmark set of first company commitments by a number of multinational food companies and large restaurant chains, with recruitment ongoing.

### **UNITED KINGDOM**

The United Kingdom launched a salt reduction strategy in 2003 following a review of the scientific evidence by an independent scientific advisory committee that recommended a daily salt intake target of 6 g/day. The average salt intake in the UK at that time was 9.5 g/day, with an estimated 75% coming from manufactured food products. The salt reduction strategy consisted of two principal areas of work: a consumer awareness campaign, and the creating of an enabling environment by working closely with the food industry to provide clear nutrition labelling and to reformulate processed foods. A “Food Salt Model” to demonstrate the necessary salt reductions in a group of 85 foods was developed, and formed the basis for discussions with industry and NGOs on voluntary salt reduction targets, which have been set for 2010 and 2012. Activities by a wide range of NGOs, local government partners, and religious groups amplified the messages from the awareness campaign. Significant reductions in the amount of salt in common food categories such as bread and breakfast cereals have been achieved. A large proportion of packaged foods carry nutrition labelling and this has played a part in driving public demand for healthier food. Data to 2008 show a 10% reduction in the average population salt intake. The fact that the campaign received considerable financial and political backing has contributed to this success. The flexible and open approach adopted by the FSA, which also reported on the achievements made by the food industry, strengthened the programme.

## ***Regional experiences***

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### **THE EU EXPERIENCE**

The EU Framework for National Salt Initiatives was launched in 2008 and since then most EU Member States have made salt reduction a public health priority. The recommended maximum target for salt consumption in most EU Member States is 6 g/day or less. The average level of salt consumption across EU countries is 8–10 g/day. A common minimum European benchmark has been the seeking of a 16% salt reduction from baseline 2008 levels over 4 years across all food products. Within this benchmark, however, there is flexibility for EU Member States to choose for their national plan, different reduction levels or other baseline years fitting their national situation. The principal objectives of the European framework are to support national plans by setting minimum benchmarks, identifying “best in class”, involving stakeholders at EU level and maximizing impact by presenting industry with a large and unified market demand for products with reduced salt content. This would be especially advantageous to smaller Member States. Monitoring and evaluating activities, as well as raising public awareness, are within the responsibility of national governments. The EU framework is not a legislative measure but aims to promote best practice. Its adoption by Member States remains voluntary and as a result not all members have reached the same levels of implementation.

### **THE PAHO EXPERT GROUP**

Among the Member States of the Pan American Health Organization (PAHO), only three, Argentina, Chile, and Canada, had plans to implement salt reduction policies prior to 2009. A group of scientific and technical experts was formed in 2009 and given a two-year mandate to strengthen the implementation of population-wide salt reduction in all countries within the region. The group has developed recommendations on actions to be taken by national governments, nongovernmental groups and the food industry and is providing resources to aid policy development. Actions are in accordance with WHO policy and will address product reformulation, consumer awareness and education and creating enabling environments. A review of national salt fortification with iodine policies is also planned. The policy goal is to obtain a gradual and sustained drop in dietary salt intake to reach national targets or to reach the WHO target of less than 5 g/day by 2020. The group is facing a number of challenges: many countries in the region do not have plans to develop a salt reduction programme; population data is scarce because of resource constraints; export of reformulated products to developing countries is not given priority; many governments lack mechanisms for negotiating with industry; conflicts of interest are evident among influential groups; certain corporations spread misinformation using “umbrella organizations”. However, the group is well resourced and is confident that good progress will be made to achieve the declared policy goal across the whole

region. Significant progress has been made in developing educational and advocacy resources, surveillance tools, and mechanisms for interacting with industry. In the interim, several additional countries in the Americas have developed plans to implement salt reduction policies, including the United States, Mexico, Brazil, Barbados, Costa Rica, Nicaragua, El Salvador, Guatemala, Belize, the Dominican Republic and Panama.

### **THE EUROPEAN SALT ACTION NETWORK (ESAN)**

The European Salt Action Network (ESAN) was formed in 2008 and is hosted by the FSA. The network aims to provide technical support and to disseminate results of scientific research and technological developments among Member States of the WHO region for Europe. Membership is restricted to WHO Member States only, and to date 23 of the 53 have joined. NGOs and the food industry can only attend informal debates; lobbying is not allowed and the ESAN website is not open to the public. Since its inception, ESAN members have had five meetings and some progress has been made. The network has drafted two practical documents, one on communication strategies, and the other on how to engage with industry and set targets. It has developed a standard protocol for performing 24-hour urine sodium assays. Members have received regular updates on new scientific evidence as well as other related issues of interest.

### **THE WESTERN PACIFIC REGIONAL NETWORK**

The creation of a Western Pacific Regional Network was discussed at a regional consultation in Singapore in 2010 with invited participants acting in their own capacities. The next step is for recommendations resulting from the consultation to be presented to health ministers of WHO Western Pacific Region Member States at a future Regional Committee Meeting. Participants proposed the formation of three regional subgroups covering East Asia, South East Asia and the Pacific Islands and also proposed to follow the ESAN model by admitting only government representatives as full members. Doubts were raised over the need of an additional network focusing on salt reduction, since networks already exist for noncommunicable diseases. It was also suggested that regional salt reduction subgroups could be based on existing regional networks (not necessarily health-related) such as the Association of Southeast Asian Nations (ASEAN). However a possible issue with this model is how to proceed if countries within the existing regional network are not part of the WHO Western Pacific Region (e.g. Indonesia, Thailand and Myanmar are members of ASEAN, but not part of WHO WPR).

Proponents in favour of setting up a salt reduction network stated that aside from allowing sharing of resources, best practices and technical expertise, a network would bring added value by presenting a unified voice and increasing regional demand for reformulated and adequately labelled products from multinational companies. This would be particularly relevant for smaller countries that depend on food imports. In addition, if countries in the network have common labelling standards for salt, small and medium businesses could potentially have access to a larger market and may find it more attractive to invest in developing lower salt products.

## **Conclusions**

- Progress in implementing salt reducing strategies is not uniform across countries and some Member States still have to develop a salt reducing policy.
- There are clear differences between country resources, levels and sources of salt intake as well as behaviours and dietary patterns within communities. In spite of these differences there are several common principles and general guidelines which can be identified and shared, especially with LMIC, to ensure the successful implementation of a successful salt reduction strategy.
- Salt added during cooking and at table is an important source of sodium intake in traditional diets of several countries, especially in Asia. Salt in processed foods is the major source in countries with a western diet.
- Any apparent conflict of a salt reducing strategy with other programmes, especially in countries where iodine deficiency is still a health problem, needs to be resolved.
- Daily salt intake in most countries exceeds the recommended WHO target of less than 5 g/day.
- A number of countries report good progress and positive achievements. These are attributed to strong leadership and commitment, adequate resources and adopting an open but firm approach with the food industry.
- Regional networks can provide an important supportive role to Member States.

# Implementing a salt reduction strategy: a practical approach

The following guiding principles are taken from the reports of the working groups as well as presentations made by the speakers during the plenary sessions. As a result, the principles reflect discussions at the meeting only and may not therefore cover all the barriers and countermeasures that need to be considered as part of establishing a salt reduction strategy.

The headings describe the core elements that need to be considered when developing and implementing a salt reduction policy. The elements described in the next section have been grouped under three general categories: planning phase, implementation phase and evaluation phase.

Policy makers are encouraged to consider the elements in the list below, when developing national interventions. However, it is important to acknowledge that each country will face different challenges, and therefore the potential barriers and countermeasures provided in the next section should be interpreted in light of the most adequate and feasible actions according to national needs, characteristics, resources and overall objectives and addressed accordingly in order to effectively implement salt reduction policies.

## 1. PLANNING PHASE

### 1.1 Leadership and resources

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Strong political leadership, adequate resources and a clear mandate are critical for the success of a population-wide salt reducing strategy. A coordinating group is to be formed at this stage.

#### **Potential barriers**

- Countries may have limited capacity and resources to implement new programmes.
- Industry and trade associations may take strong positions to defend their interests.

#### **Countermeasures**

- WHO, regional networks and other international agencies can provide technical support and other Member States can share their experiences.
- A multisectoral and multistakeholder approach and strong networking between policy leaders, other government departments, NGOs, consumer groups, academia and the food industry can provide a strong level of support for the salt reduction agenda.
- Costs can be reduced by working within available structures and by avoiding the duplication of work. Regional networks and WHO can help facilitate this.

### 1.2 Preparation of policy brief

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A policy brief prepared by the coordinating group needs to be based on sound scientific evidence and include relevant local data. The contents of the brief would describe:

- The scientific evidence connecting salt to ill health and the attributed risk to cardiovascular diseases and stroke.
- The cost-effectiveness of campaigns in other countries.
- Estimates of the cost-effectiveness and economic benefits of implementing a national salt reducing strategy and reformulation programme.
- The current salt intake levels of the local population.
- The salt content in the food supply.
- The impact, where applicable, of salt reformulation on iodine fortification programmes.

#### **Potential barriers**

- This information may not be readily available and some countries may lack the capacity and resources to carry out necessary research to obtain baseline data and to guide policy.

#### **Countermeasures**

- WHO can help stimulate research networks in developing the evidence base and in

identifying key areas of research needed by Member States.

- Countries can first estimate if salt is a public health priority by using routine health information data such as those provided by STEPS (36), and use models to calculate the NCD burden attributable to salt.
- Evidence presented must take into consideration the needs and perceptions of the audience being targeted. Governments are more likely to be influenced by economic impact analysis.

### 1.3 Measurement of population salt intake

The 24-hour urine collection method can be used to determine the baseline population salt intake. Eating patterns of the population also need to be studied in order to identify the principal sources of salt in the diet. Awareness of the relative salt contributions of salt and other condiments in the home versus processed foods and meals, and those eaten out of the home to the overall salt consumption at population level will inform more specific tailoring of salt reduction policies.

#### Potential barriers

- The 24-hour urine test method may be seen as cumbersome and resource-intensive and may be beyond the capacity of many countries (depending on how it is designed and carried out).
- Data on salt content of manufactured food may not be available and many countries may not have the capacity to perform comprehensive food analysis.
- The salt content of food sold in the informal sector such as by individual street vendors is variable, as they are not prepared to set recipes and standards.

#### Countermeasures

- WHO can work to facilitate the development of affordable or alternative sodium test methods.
- Some countries use 24-hour dietary recall in lieu of 24 hour urine collection, while taking into account that results are an underestimate.
- WHO, industry, NGOs and academia can cooperate to compile a compendium of food analysis data that includes salt levels in manufactured products.

### 1.4 Setting an Action Plan

The coordinating group prepares an Action Plan, which sets clear objectives, describes strategies, decides realistic targets and predicts financial and human resource requirements.

Four parallel areas of work would address:

- The implementation of a public awareness campaign and other educational activities.
- The engagement of food producers and distributors to reformulate foods and meals in order to provide products with less salt, including the establishment of targets for salt reduction in all food categories, and ensuring the use of clear and accurate food labelling showing salt levels in packaged food.
- Research activities.
- Monitoring and evaluation.

#### Potential barriers

- Many countries have competing priorities and would not be able to allocate sufficient resources for the specific activities of a salt reducing strategy.
- There may be resistance to an Action Plan from some quarters, especially from the food industry. Health professionals may be sceptical in countries where salt is used for iodine fortification.

#### Countermeasures

- WHO and other regional networks can provide support in identifying priorities and developing an Action Plan and integrating it as part of existing NCD Action Plans.
- WHO is already working to address the perceived interaction between iodine fortification and salt reduction policies in a number of countries.

### 1.5 Defining national goals

*Recommended dietary salt intake:* National dietary guidelines will include the recommended average national salt intake. WHO recommends a salt intake per person of less than 5 grams per day (37). Countries with a much higher baseline should consider setting an interim target that would be more achievable in the short term.

*Minimum benchmarks for reformulation:* Benchmarks include timed reductions in the amount of salt found in priority food categories and these may vary depending on the eating habits of populations. Benchmarks can either be voluntary agreements with the food industry or mandated in legislation by governments. Reaching agreed voluntary benchmarks will require sustained commitment from the food industry to reformulation.

#### Potential barriers

- Individual consumer preference for salty foods may be difficult to overcome.
- Countries may not have sufficient data on key foods that contribute to salt intakes and levels of salt in food to determine benchmarks.
- The food industry may default on agreed benchmarks.

**Countermeasures**

- Public awareness campaigns can sway consumer preference.
- Consumer palates adjust to lower salt products relatively quickly. A programme which promotes gradual reduction is more likely to succeed in maintaining consumer acceptance.
- Countries can obtain technical support from WHO and other regional networks.
- Commitments obtained from industry should be specific, measurable, time bound and public.
- Advocacy by NGOs and consumer groups can keep the pressure on the food industry to deliver on its commitments.
- Governments may consider setting mandatory levels for salt use or provide incentives for salt reduction.

**1.6 Strengthening advocacy**

Professional groups, NGOs, academia and consumer groups can lobby government and policy leaders to increase awareness of the importance of salt reduction in the public health agenda.

**Potential barriers**

- Many developing countries do not have influential consumer groups.
- Local NGOs in LMIC may not be aware of the negative health implications of salt consumption, and may perceive salt as a positive dietary component due to its potential fortification with iodine.
- Public expectation in certain countries is for government to take responsibility in protecting its citizens from harm.
- Research institutions show academic interest only in the salt agenda and are reluctant to push for action.

**Countermeasures**

- The coordinating group can identify and approach relevant local groups and social networks with a view to working with them as partners.
- WHO and international NGOs can involve and support smaller national NGOs and other civil society groups.
- Respected health professionals can encourage NGOs to lobby government for stronger action on salt awareness.

**2. IMPLEMENTATION PHASE****2.1 Identifying stakeholders**

The coordinating group needs to identify the stakeholders with whom it needs to collaborate and the methods to achieve this. Potential stakeholders can include:

- Different government departments, e.g. health, trade, food and agriculture, education, local and regional authorities.
- All sectors of the food industry, including retail associations and catering groups.
- Health professionals, professional organizations, universities, research institutes and food safety agencies.
- The mass media.
- NGOs, consumer groups, religious and faith-based organizations and other non-profit organizations.

**Potential barriers**

- The producers and distributors of processed foods and meals may have little awareness of links between salt, health and NCDs, and may be unwilling to reduce the salt content of their products.
- Stakeholders may not be aware of the dangers of excessive salt intake and some may view the use of salt in a positive light.
- Many countries do not have identifiable trade and consumer organizations.
- The informal sector is less well defined. Smaller food companies, street vendors and small caterers may not have representatives and thus are difficult to reach and get involved.

**Countermeasures**

- The trust of the food industry can be gained by using an open approach. The importance of reformulation, the benefits need to be communicated clearly. Incentives may also be considered.
- Develop a clearly presented document highlighting the evidence base for action on salt reduction
- Mapping techniques can be used to identify where business interests lie and how different groups associate, for example some may use the same supplier.
- Respected academics or scientists may use their influence to spread the message to other academics and NGOs in order to lobby for reformulated food products.
- International organizations and NGOs can share support and resources with smaller local organizations.

## 2.2 Engaging the food industry and other stakeholders

Having good working relationships with a critical mass of key industry representatives and other stakeholders is essential. The coordinating group needs to have a working knowledge of the food industry. The importance of local vendors and small caterers should also be taken into full consideration.

### Potential barriers

- The food industry may disengage if profits or market share are affected. It can also try to influence policy through “umbrella organizations” and paid consultants.
- Resources may not be sufficient to engage all sectors of the food industry.
- The presence of fast food chains is increasing in many developing countries where they may be considered the “elite” food choice.
- The majority of processed foods may be imported from neighbouring countries and there may be limited opportunities to influence changes in these products.

### Countermeasures

- The coordinating group can start by identifying progressive companies, already engaged in reformulation and work with them as champions in their sectors.
- The coordinating group may refer to food technology experts for technical advice on reformulation of food products.
- The food sector can be motivated by publicly acknowledging progress. NGOs can also “name and praise,” or alternatively, “name and shame.”

## 2.3 Engaging the media

The mass media is instrumental in raising awareness and increasing public knowledge and interest. NGOs and consumer groups often use the media for advocacy and this may be effective in forcing the food industry towards reformulation.

### Potential barriers

- Preconceptions held by some journalists regarding salt consumption need to be overcome. Salt is frequently considered a beneficial product, especially where it is fortified with iodine, and the implications of excessive salt intake, such as high blood pressure, are not always recognized.
- Sponsoring of the media by the food industry and other commercial influences can confuse the public.

### Countermeasures

- Good engagement with the media from the initial stages, and taking a proactive approach - e.g. preparation of “myth busters” and questions and answers – to help address opposition and avoiding highly technical jargon can ensure a more positive and balanced campaign.
- The coordinating group can identify spokespeople prepared to respond to requests made by the media.

## 2.4 Launching a public awareness campaign

The ultimate goal of a public awareness campaign is to raise awareness about the health impacts of excess salt consumption and inform consumer demand for lower salt food products. Campaigns need to be informed by research and to be strategically planned for maximum impact. They should be part of a long-term strategy and not run as one-time events. Limiting activities to the distribution of educational leaflets will not lead to changes in dietary behaviour.

### Potential barriers

- Public awareness campaigns are expensive and there are often competing priorities for resources. TV airtime can be particularly expensive.
- Countries may not have experience in running public awareness campaigns for public health, and public health officials may not have training on dealing with the media.
- There is insufficient evidence on the effect of media campaigns on more vulnerable lower socioeconomic groups.
- A mixture of cultures, each with differing food preferences, often exist within countries. Campaign messages may not adequately cover all groups.

### Countermeasures

- Successful public awareness campaign models can be used by other countries if they lack experience or resources. However, they need to be adapted for the country's cultural context and needs.
- Media campaigns can be more effective if they have a popular and respected public figure as “champion.” The timing for the launch must also avoid clashes with important holidays that are culturally associated with food.
- Managers leading the campaign need to adopt a multidisciplinary approach and take advantage of different types of media that may be less costly and which consumer groups recognise and respond to. These can include theatrical productions, religious and faith-based activities, musical groups, radio shows and the internet and working with industry to provide information to consumers at point of sale.

## 2.5 Reformulation

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Many multinational companies include reformulation work in their corporate responsibility policies but salt levels vary across different markets, are not consistent around the world and can be higher in foods exported to LMIC. Reformulation targets are more likely to be reached if there is strong political support and public demand pushing for reformulation.

### **Potential barriers**

- The food industry may not cooperate enough in reformulation efforts because of fears of extra cost, rejection of reformulated products by consumers, reduced shelf life and food safety issues.
- The food industry is reluctant to share technical expertise with competitors and food technology experts are often in the employ of food companies.
- Products of designated origin and other traditional foods may be more difficult to reformulate and local producers often lack expertise in food technology.
- Lower-income countries may have less capacity to overcome food safety issues because refrigeration facilities may be scarce.
- Where “low” or “reduced” salt versions of standard products are produced these may appeal only to a small “niche” market and may be sold at a higher price.
- World Trade Organization regulations may override import restrictions.

### **Countermeasures**

- The coordinating group needs to monitor and report progress made by the food industry, while keeping an open but firm dialogue with representatives of the industry.
- The coordinating group can support small and local producers by hosting information exchange meetings on how to overcome technical issues and by providing access to food technology experts.
- Governments can regulate and monitor the quality of imported food brands and ensure that reformulated products are sold at a reasonable price.
- Regional WHO networks can support countries by sharing information and by facilitating access to a team of regional or global food technology experts.
- WHO, NGOs and other groups can produce a common database of reformulated food products.

## 2.6 Regulation

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The food industry is more likely to comply with imposed reformulation and food labelling standards set by governments. Regulation can include specific settings such as school lunches and catering in public institutions.

### **Potential barriers**

- Food regulation is more commonly used for assuring biological and toxic food safety.
- Regulation and taxation are complex interventions and may not be appropriate or equally enforceable in all countries.
- Introducing legislation can be time consuming and the resulting regulation may be less flexible, effective and responsive to change than voluntary measures.

### **Countermeasures**

- Regulation for food labelling and for reduction of the salt content in foods can be introduced gradually, initially targeting high priority food categories.
- Governments can consider offering tax breaks as incentives to encourage compliance by the industry.
- Governments can respond to advocacy efforts by NGOs and limit commercial advertising of high salt products.
- Voluntary measures to reduce salt content may be used to identify what is possible in the market and the costs associated with the work before regulation is introduced.

## 2.7 Food labelling

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Food labels should provide useful information that is consistent, accurate and easy to understand so that consumers can clearly identify foods both high and low in salt.

### **Potential barriers**

- There may be insufficient resources to identify the nutritional content of food in LMIC, especially by smaller food operators.
- If the majority of the foods are imported, the nutrition label - when existing - may be in languages different from the national language(s).

- Terminology used on labels can vary and confuse consumers. Vulnerable groups may have literacy issues.
- The preference of styles may not be the same across cultures and the food industry may oppose certain formats.
- The food industry may resist salt labelling since many foods contain sodium in their natural state.

### **Countermeasures**

- Priority pre-packed foods that are high in salt content should be first to carry food labelling in countries where resources for profiling are limited.
- The coordinating group has to identify consumer-friendly labelling formats, e.g. by using focus groups. Generic healthy eating symbols or nutrient limited front-of-pack labels may be more consumer-friendly than complicated and extensive back of pack nutrition information; the style can be negotiated with producers.
- Food labelling can result from voluntary agreements with the industry. However, there are several arguments in favour of mandatory labelling, such as consistency across the market and improved monitoring of compliance by the industry.

## **2.8 Linking with NCD strategies and government activities**

Working within the structure of existing NCD programmes would allow for a more holistic approach and may be more efficient as duplicate work is avoided. Public procurement and standard-setting in government institutions can also serve as a powerful driver for the food industry by creating demand for reformulated products.

### **Potential barriers**

- Some government sectors, such as trade and agriculture, do not share the same priorities as the health sector.
- Too many health and nutritional messages can confuse the public.
- Available resources may not cover the additional work burden if the salt agenda is added to other running programmes.

### **Countermeasures**

- The Minister with responsibility for the salt reduction programme may be able to influence the other government sectors so that the issue can be raised at ministerial coordinating committees held at cabinet level.

- The health and education departments can integrate health promotion in schools and ensure school curricula are set in a “healthy environment” context.
- Government institutions that comply with “healthy” food standards can be recognized and rewarded.
- Mass media campaigns using one simple message may be more effective; and/or coordinate timing of campaigns that highlight different health messages so that consumers aren’t given a number of messages at any one time.
- Review currently running programmes (using when available cost effectiveness/cost-benefit analyses) and see if work on salt reduction could be accommodated within existing budgets.

## **3. EVALUATION PHASE**

### **3.1 Monitoring and evaluation**

It would likely be beneficial if the monitoring and evaluation can be integrated in a national surveillance system. Evaluation should also include a review of resources that are needed to maintain a sustainable and effective strategy.

### **Potential barriers**

- Monitoring population salt consumption using 24-hour urine testing can be expensive and resource intensive depending on the design selected. Countries may not be able to afford to do this.
- Monitoring and evaluation may fail to detect any inequalities that result either directly or indirectly from the salt reduction policy.
- Evaluating the impact of media campaigns and other interventions on behavioural change can be difficult.

### **Countermeasures**

- Less expensive test methods, such as spot urine tests, can be used for subsequent periodic monitoring of population salt intake. The 24-hour method can be used to obtain baseline levels and repeated as an outcome indicator.
- WHO is organizing a separate platform in the form of an additional technical meeting to discuss and report on methods to monitor and evaluate salt reducing strategies.

# *Designing a public awareness campaign: country experiences*

## *Chile*

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### **Setting**

The National Health Survey of 2007 reports that one third of the population in Chile is obese and suffers from high blood cholesterol and high blood pressure. The survey also estimates that one in seven deaths is attributed to hypertension and one in eight deaths to salt intake. Although Chile does not have national data on food consumption or salt intake, the high burden from cardiovascular diseases was considered to be strong justification in implementing a salt reducing policy and to launch a public awareness campaign. The implementation of the campaign has been delayed by recent natural disasters which have struck parts of Chile and destroyed many hospitals and government buildings.

### **Public awareness campaign**

The public awareness campaign in Chile aims to increase public understanding of food labelling. This follows a regulation and legal framework based on *Codex Alimentarius* in 2006, which has mandated nutritional labelling of all imported and exported, packaged and processed foods. Much of the processed food market in Chile is concentrated around a few producers, and this has made regulation easier to implement and enforce. Chilean civil society in general considers government responsible for the quality and safety of food, and this may have facilitated the compliance of the food industry. Consumer research using focus groups revealed that local consumers do not easily understand the UK traffic light system on package labels and alternatives are being developed. A national food consumption survey will be held in two years' and results will determine future activities.

## *Hungary*

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### **Setting**

Daily salt intake of the Hungarian population is estimated to be three times higher than that recommended by WHO. The "STOP Salt!" National Salt Reducing Initiative was launched by the Ministry of Health at a stakeholder meeting in 2010, where food industry, NGOs, consumer groups and ministries were represented. The initiative is based on EU guidelines and includes: collection of data on the national situation; agreed benchmarks for salt reduction; reformulation of food products; an awareness raising campaign, and monitoring and evaluation activities. In spite of widespread support, no significant commitments have been made by the food industry to date. One positive development has been the recent signing of a cooperation agreement by a mass catering company to reduce salt levels in their meals.

### **Public awareness campaign**

The "STOP Salt!" public awareness campaign was designed and coordinated by the National Institute for Food and Nutrition Science. The campaign focuses on the health effects of excessive salt intake, and targets, principally, young mothers and adults in the 20–59 age group. The campaign uses the print and broadcast media and social networking websites for dissemination. Articles have been posted in daily newspapers to bring awareness to the general public and in peer reviewed health journals for the attention of health professionals. Activities have included free distribution of informational leaflets, flyers and posters, mostly in pharmacies, supermarkets and at special events. Prominent

messages on billboards have featured on public transport. Additionally, an annual cooking contest has been launched and T-shirts and other souvenirs with specific messages distributed at special events. Currently, monitoring and evaluation of the campaign is in progress and messages for future campaigns will be defined using the results.

## ***Thailand***

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### ***Setting***

Mean salt consumption in Thailand has decreased progressively from 20.8 g/day in 1998 to 10.8 g/day in 2008. Nutrition labelling, which included salt, was first regulated in 1998. The “Thailand Health: Lifestyles Strategic Plan 2007–2016” targets the major risk factors for NCDs. Strategic activities include social mobilization and public communication. The salt reduction campaign in Thailand “Salt-Net 2007–08” aims to limit the intake of salt to not more than 5 g/day through raising consumer awareness and strict salt labelling regulation. Food policy targets aim to reduce the amount of salt, fat and sugar in snacks by 25% and to reduce the amount of salt in soy sauce, oyster sauce and other condiments by 20%.

### ***Public awareness campaign***

The “Thai People Flat Belly” public awareness campaign started in 2008 with the collaboration of the Department of Health and the Thai Health Promotion Foundation. The campaign is directed at individuals, organizations, and communities, and apart from waist measurement activities it also addresses diet, physical activity and mental wellbeing. It has received strong political support and campaign activities have ranged from radio broadcasts to public information sessions held in schools and local administration organizations. Banners with health messages have been placed at Bangkok airport and places of worship while mobile cars with health messages also drive around some provinces. More interactive methods with the general public have been used, such as the “Healthy Menu Contest”, a publicity campaign in a popular night bazaar in Bangkok and a “Healthy Food Menu for Healthier Choice” in restaurants, reminding customers to make healthy choices. Packed foods also carry a “healthy” logo if they contain 25% less sugar, fat, and salt than the original. It is estimated that 20–30 million people have been exposed to campaign activities, and reported salt and sugar consumption have decreased. Implementation areas have also observed stable rates of hypertension.

## ***United Kingdom***

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### ***Setting***

The FSA's programme of work on salt reduction began in 2003. A successful and well-funded public awareness campaign was run as part of this programme, which has been used as a working model by other international parties. The campaign reported significant achievements, including an increase in awareness of the 6 g/day message, and the use of food labels by consumers to check the salt content of food.

### ***Public awareness campaign***

The UK's public awareness campaign was run in four phases, with each phase focusing on a different key message to ensure that consumers were informed of why a high salt intake is bad for their health and the actions they could take to reduce their salt intakes. All four phases were targeted at women, as gatekeepers of a family's food, focusing on those in the mid to lower socio-economic classes; and was initially targeted at those aged 35–65 years in phases 1 and 2 which was extended to those aged 25 and upwards for the later phases. Each phase of the campaign was supported by comprehensive background research, which helped identify the most effective media and messaging to use. To help inform the articles that appeared in a wide range of newspapers and magazines, a factsheet was designed and distributed to journalists. The campaigns used TV and radio advertising, posters and a variety of leaflets and other consumer-focused materials including information being available online. Various joint activities were run with industry such as visual prompts at the point of sale, the distribution of coupons for lower salt foods, reminders on food packaging, and a road show. Joint activities with NGOs were similarly used to target messages at hard-to-reach groups e.g. the elderly, ethnic minorities, teenage parents.

## ***Australia***

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### ***Setting***

The Australian Division of World Action on Salt and Health (AWASH), a non-profit organization hosted by the George Institute for Global Health in Sydney, launched a 5-year salt reduction campaign in May 2007. The purpose was to unite health professionals, government, scientists and consumer organizations to take action to reduce salt intake in Australia and to put pressure on the food industry.

### **Public health advocacy campaign**

The “Drop the Salt!” campaign is a public health advocacy campaign inspired by the Food Standards Agency and Consensus Action on Salt and Health (CASH) in the UK. It exerts pressure on the government and the food industry to address salt intake in Australia and to make salt labelling of foods mandatory. It aims to reduce salt intake in the Australian population to 6 g/day by 2012. Campaign goals, objectives and implementation strategies were formed after extensive consultations with primary stakeholders, especially other nongovernmental and consumer organizations. After a number of consultative meetings, a high profile agreement with the food industry was reached and a call for an average 25% reduction in salt over 5 years was made. AWASH is closely monitoring the response of the food industry including through a database containing sodium levels of over 7 500 food products using 2008 levels as a baseline. In addition to issuing regular eye-catching media press releases, AWASH also organizes high profile meetings with politicians, government officials and popular media hosts. Leaflets and newsletters are periodically distributed and updated with new research findings. The AWASH website is another important education and advocacy resource. The speaker announced that the future Government Health Risks Survey in Australia will include dietary salt intake monitoring using spot urine assays. The George Institute for Global Health will also be monitoring sodium intake by 24-hour urine assays on a small sample of the population.

## **Kenya**

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### **Setting**

Kenya has no plans as yet for a national salt reducing campaign. However, there is an alarming increase in noncommunicable diseases in many parts of urban Africa with hypertension being the most significant risk factor. Africans are known to have an increased sensitivity to salt. The African diet consists mainly of unprocessed food but salt is usually added while cooking.

A small pilot study was performed in Nairobi, Kenya among women belonging to an organized church group in a lower class suburb. The intervention consisted of health

messages given during presentations, distributed brochures and focus group discussions, once a week for four weeks. The study outcome measures were blood pressure readings and urinary sodium excretion. Data was collected at week 4 and week 16. Results failed to show any significant reduction in blood pressure or 24-hour urinary sodium excretion by the end of the study. The conclusions from the study were that:

- The number of defaulters increased with every successive 24-hour urine collection.
- The women were not aware of the relationship between high blood pressure and salt nor did they have knowledge on most of the health issues discussed.
- Many participants suggested that men should be included in similar events.
- Some women observed that many people in their community buy food from street vendors for convenience.

### **Conclusions**

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- Public awareness campaigns must receive strong political backing and have sufficient funding and resources.
- The mass media, the internet and other approaches have been successful in communicating messages.
- NGOs can play a pivotal role in pushing the salt agenda to government and the food industry as well as to the public directly.
- Many campaigns are relatively new as various countries are mostly at the stage of obtaining and refining national data for salt consumption and salt content in the food supply.
- Many campaigns to date have concentrated on adults and young mothers as the main target audience, however communications have been spread population wide.
- Mass media campaigns need to be supported by more interpersonal and environment-based approaches to sustain behavioural change.
- The UK FSA model has influenced a number of other campaigns in other countries.

# Designing a public awareness campaign: a practical approach

Country experiences and lessons learnt were presented during this session. The speakers represented a mixture of international settings and capacities. Although common approaches were apparent, each provided distinguishing features, the resources, cultural settings and administrative systems of each country differing.

## *Lessons learnt:*

- Changing consumer behaviour requires a well resourced and sustained social marketing strategy. Approaches that include both the media and personal contact with consumers need to be used.
- Consumer awareness alone is not enough to reduce salt intake in populations.
- Public awareness campaigns need to be sensitive to cultural and linguistic issues. They need also to remain responsive to changes in consumer knowledge, attitudes and behaviours.
- Campaigns in low resource settings need to consider that there may be other practical constraints, e.g. access to the internet, less vocal community groups.
- Although sharing experiences across countries could be useful, policy makers may be sceptical and resist replicating “imported” campaigns.
- Public awareness campaigns need to be carefully planned and note taken that brief campaigns are less likely to obtain changes in salt intake than longer, more sustained actions.
- An open communication approach with the food industry on public awareness work can be useful.
- Criticism of the food industry should not be made lightly. Allegations need to be backed by facts and NGOs may be advised to seek legal advice when criticizing harshly.
- Evaluating the real impact of a media campaign can be problematic. NGOs may need support to complete monitoring and evaluation of the activities they run which complement the wider government lead campaigns.
- Engaging industry and NGOs can help amplify Government messages and tailor them to hard to reach groups.

## *Basic principles*

The details of the campaigns presented by the speakers all had distinguishing features but common ideals were apparent: the ultimate goal for all being to raise awareness to the risks of excessive salt intake to health and inform consumer demand for lower salt food products. During the meeting it was highlighted that public awareness campaigns could follow the six principles used by advertising campaigns:

### **1) Why?**

A briefing paper should be produced which needs to include a summary of current scientific evidence supporting the need for salt reduction and the effectiveness of different interventions adopted by various countries. The paper should also mention the principal sources of salt in the local diet and give an estimate of the average salt intake of the population. The briefing paper can then be adapted to the target audience for the campaign.

### **2) Who?**

A target audience needs to be identified. Most public campaigns target adults but more extensive campaigns also target younger age groups. Campaigns may also give special attention to women within a family, as they are likely to be the gatekeepers to the household diet. Whoever the target audience is, it is important to focus on those who will take the messages on board and make changes to their diet or eating habits.

### **3) What?**

Planning key campaign messages requires basic information on what an audience already knows and understands about salt and health. Many cultures have a positive attitude towards salt, as it is the most common natural preservative used and can also carry significant cultural significance. Consumer research can provide useful insights such as preferences and motivating influences for salt intake.

Messaging will also be shaped by the audiences exposure to previous public health campaigns and is likely to be more effective if it includes both initial awareness raising and providing hints and tips to consumers about how they manage their salt intakes.

#### **4) How?**

It is important to use the correct wording, symbols and styles of presenting messages that are most likely to stimulate and motivate behavioural change. Understanding of the issues may be affected by factors such as age, cultural setting, gender and level of education. Interactive methods of communicating messages, such as cooking contests and demonstration kitchens, may be more effective in changing individual behaviour, but require higher organizational capacity.

#### **5) Where?**

It is important to consider the media that the target audience read or watch so that these can form the focus of the locations for the messaging. Messages in the printed media, such as articles in newspapers and magazines, can be informed through a factsheet which will make writing the articles relatively easy to produce; messages in this format may also be distributed in large numbers. Printed billboards placed in strategic places can also be used but these may be more costly. The broadcast media such as popular radio channels and TV shows may also be effective. The internet is becoming increasingly important as a tool of communication.

Engaging food retailers may also help as they will be able to get messages to consumers where food is sold and at the point when consumers are making their food choices. It may also be important to use relevant spokespeople to help get messages across to specific groups.

#### **6) When?**

Competing forces may reduce the impact of campaigns so it is useful to plan the best time for a launch. People are less likely to assimilate campaign messages during special holidays or festivities that are typically celebrated around food.

# Creating enabling environments: theory and practice

Salt reducing strategies need to be embedded in an environment that will enable and support changes in behaviour so that the healthy choice becomes the easier choice. This section summarizes theories of behavioural change, public procurement collaborations, and standard-setting by government that were presented at the meeting and which have been used successfully in salt reducing campaigns to create enabling environments and achieve “health by stealth”.

## Summary:

- Behavioural change that reaches a critical mass of adopters can lead to healthy-seeking behaviours at population level.
- Schools-based interventions that control the composition of school meals and limit food choices are effective in reducing salt intake.
- Governments need to lead by example by serving healthy food in public institutions and using healthy nutritional standards in contracts for public procurement of food and meals.
- Planned menus in institutional settings can be useful in addressing both macro- and micro-nutrient imbalances.
- Collaborative procurement frameworks across government departments can facilitate reformulation by the food industry by increasing market demand.

## Applying behavioural change to salt reduction

For salt reduction strategies to have any impact on public health, a significant shift in salt intake must occur that is both sustained and sufficiently widespread. The systematic application of theories in behavioural change to salt reduction activities can be used with advantage to improve outcomes.

Theories in behavioural change fall into three main categories:

1. Descriptive models: those used to *describe* influences on behaviour
2. Behavioural change models: those intended to *inform* the development of strategies to bring about behavioural change, and
3. Behavioural change mechanisms: those *mechanisms* or tools used to identify specific interventions to implement a strategy.

Descriptive models come from several disciplines, predominantly psychology and social sciences or public health. Those from psychology often include, for example, attitudes (e.g. perception of taste, relative cost, ease of preparation), norms (e.g. a person’s perception of what people who are important to him/her think of certain behaviour) and self-efficacy (a person’s belief in his or her ability to succeed in a particular situation).

In contrast, societal models describe the behaviour of individuals interacting with other, mostly external, influences, e.g. living and working conditions, economic, social and cultural factors. These models can be used to scope possible behavioural change strategies which operate at different levels, for example at population, community and individual level.

*Behavioural change models* can be used to decide what types of interventions should be used and when. For example the Diffusion of Innovations model describes the spread of changes in behaviour in a population, and strategies such as that used in North Karelia in Finland have used this successfully. The model works on the premise that different sections of the population will respond better to different mechanisms.

*Behavioural change mechanisms* and approaches, and that these approaches will need to be modified over the course of implementing a strategy. For example the most receptive population groups may be reached easily and quickly through social marketing campaigns. Later on, other mechanisms such as community development and interpersonal approaches, may be more effective both at reinforcing change and at reaching other population groups.

The “Innovation–Diffusions” approach describes the spread of innovation in a community. The “innovators” and “early adopters” are the most receptive groups and will be reached initially by the mass media campaign. Over time a more interpersonal approach will prove more effective in reinforcing behaviour.

### ***Peer education***

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There has been an increasing trend in applying peer education approaches to nutrition programmes. However, the evaluation of peer education can be difficult. For example, in a recent workplace intervention for men, called “A Pinch of Salt”, there was a reported increase in awareness of salt messages but a mixed response to lower salt products (e.g. lower salt crisps were more acceptable than lower salt sausages). Peer education approaches may be useful elements to include in future work but greater understanding of this area is required.

### ***Enabling environments in schools***

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School meals that provide the appropriate nutrients for dietary requirements can have a definitive impact on eating habits and child health. Schools also have an indirect effect on families and communities as they provide a network of support structures. A report published by WHO, “Interventions on diet and physical activity: What Works” (38) concludes that the most effective school interventions are multicomponent and include a curriculum taught by trained teachers, supportive school policies, a physical activity programme and healthy food served by the school canteen services. The impact of interventions in LMIC has yet to be investigated. Legislation and regulation of school canteens has been used successfully in England and a recent primary school food survey reports a 30% decrease in salt content in primary school lunches since school food standards were set in 2006.

### ***Public procurement and standard-setting in institutions: the UK experience***

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The public sector in the UK serves more than one billion meals every year. The FSA applied nutrition models to demonstrate how the development of menus for food provided in major institutions affected their macro- and micro-nutrient content and helped to ensure that they contained enough micronutrients while controlling the amount of fats, sugar and salt present. It also worked closely with suppliers and contractors to actively encourage the procurement and provision of high quality food served in both local and national government funded canteens. A Collaborative Procurement Framework was launched in 2010 by the Office of Government Commerce to help facilitate the sustainable procurement of food products across government departments.

# *Monitoring and evaluating salt reducing initiatives: a round table discussion*

Invited guest speakers opened the round table session by giving brief outlines on various concepts for monitoring and evaluating salt reduction initiatives. The presentations were then used as the basis for the debate from the floor. The importance of having a monitoring and evaluating mechanism in place from the early planning phase of a salt reduction strategy was stressed throughout the session. The distinction between process, output and outcome indicators in the context of a salt reducing strategy was clearly made and some of the examples given are included in this section.

## *Six actions for monitoring and evaluation*

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The WHO framework to monitor and evaluate implementation (3) has been used for other programmes by WHO and can be adapted for salt reduction strategies. The following actions are suggested:

1. Ensure that monitoring and evaluation are included in any policy or programme for sodium reduction and that a budget line is included.
2. Identify existing monitoring and evaluation activities and the agencies responsible and ensure that existing data, if relevant, can inform, or be useful to the sodium reduction policy or programme implementation.
3. Identify suitable indicators to monitor process, output and outcomes of the policy or programme to reduce sodium intake.
4. Determine a baseline of sodium consumption for the population.
5. Carry out monitoring and evaluation activities in a consistent and repeated manner to enable any necessary revision or adjustment of the implementation activities.
6. If feasible, repeat the evaluation activities periodically so that a monitoring system can be established.

## *Monitoring of salt content in processed foods: experiences from a consumer organization in the Netherlands*

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A large number of consumer organizations are taking an active role in pushing the food industry into reformulation by monitoring the salt content of processed foods and keeping consumers well informed. The results of a survey performed by an NGO in 2007 were publicised by the media and this was instrumental in engaging the food industry in the Netherlands. The survey reported that salt levels in common food products were so high that it had become impossible for consumers to reach the recommended 6 g/day target. The survey also revealed large variations in the quantity of salt within the same product range and this was used as proof that some products could be reformulated rapidly. Voluntary agreements were made by the industry, however a repeat survey two years later was disappointing as it revealed that some food products were found to contain higher levels of salt than previously. This questions the effectiveness of setting voluntary targets by the industry and calls for government to take a more active role in regulating and monitoring dietary salt.

## *Examples of process, output and outcome indicators for monitoring and evaluation activities*

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During the short presentations made by the panel and the discussions that followed, a number of indicators were mentioned which could prove useful in monitoring and evaluating salt reduction programmes. It was understood that the systems used to collect and measure this range of indicators may not be complete in all countries especially since the programmes described were well funded and had access to a range of resources.

Thus within each programme the decision must be made on the best way to monitor and evaluate performance, while stressing that this needs to be an integral part of the strategy as a whole.

The following table summarizes the key points of the discussions during this session. It also presents various process, output and outcome indicators to be considered by policy makers when planning for the monitoring and evaluation part of a salt reduction intervention.

<b><i>Salt Reduction Programme Activities</i></b>		
<b><i>Education and communication</i></b>	<b><i>Food supply/Reformulation</i></b>	<b><i>Research</i></b>
<b><i>Components</i></b>		
<ul style="list-style-type: none"> <li>• Consumers</li> <li>• Food industry</li> <li>• Decision makers</li> <li>• Media</li> <li>• Health professionals</li> </ul>	<ul style="list-style-type: none"> <li>• Reformulation</li> <li>• Benchmarking of food categories</li> <li>• Food labelling</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiology</li> <li>• Nutrition</li> <li>• Public health</li> <li>• Food technology</li> <li>• Behaviour</li> </ul>
<b><i>Monitoring and evaluating</i></b>		
<b><i>PROCESS INDICATORS: MEASURING PROCESS</i></b>		
<p>Published policy, prioritizing reducing sodium intake at population level.</p> <p>Established multidisciplinary team to coordinate and monitor the programme.</p> <p>Published objectives for reducing sodium intake at population level.</p> <p>Objectives and expected outcomes by food industry defined and made public.</p> <p>Number of meetings held between government officials and relevant food manufacturers.</p> <p>Methods for monitoring consumer awareness identified (e.g. consumer surveys, focus groups).</p>	<p>Established targets for reducing sodium content in specific foods (e.g. average targets, maximum levels, high and low salt levels).</p> <p>Methods identified for monitoring sodium content in food (e.g. databank, food analyses, self-reporting by industry, market surveys).</p>	<p>Research agenda established.</p> <p>Sources of funding for research identified.</p>

**OUTPUT INDICATORS: MEASUREMENTS OF PRODUCTS OBTAINED**

Number of articles, leaflets, posters produced and published.	Number of food manufacturers providing information on sodium content on the label. Number of memoranda of understanding, letters of agreement by the industry. The salt content of selected food products (from databanks, self-reporting by industry, market surveys).	Number of sodium-related research studies planned. Funding available for research.
Number of articles, leaflets, posters distributed.		
Number of page views, unique visitors, and downloads of campaign website.		
Number of people attending cooking contests or road shows.		
Percentage of the population reached by the campaign.		
Number of NGOs participating in campaign activities.		
Number of spokespersons invited to speak on TV and/ or radio.		
Number of times health messages have run on TV and/ or radio.		
Tables indicating industry commitments to reduce salt content of foods published and publicly available.		
Tables indicating industry achievements in reducing salt content of foods published and publicly available.		
Number of companies agreeing to established targets for the reduction of salt content in foods and meals.		

**SHORT- AND MEDIUM-TERM OUTCOME INDICATORS: MEASUREMENTS OF RESULTS ACHIEVED**

Percentage of adults surveyed who are aware of the salt reduction campaign.	Percentage of reductions in salt levels in food (based on sales). Demand for high-salt food products using sales data. Demand for low-salt food products using sales data. Sales volume for table salt.	Number of sodium-related research studies completed. Number of papers written and conferences and scientific meetings held. Budget available for research.
Percentage of adults surveyed who can recall the health message of a campaign.		
Percentage of adults claiming to reduce salt intake.		
Percentage of adults claiming to read package labels.		
Number of food companies keeping to their commitments and number of companies defaulting.		

**INTERMEDIATE AND LONG-TERM OUTCOME INDICATORS**

Average salt intake of adult population.
Sodium levels in food supply.
Morbidity and mortality levels in adults due to hypertension, stroke and cardiovascular diseases.

### *Conclusions from round table discussion*

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The discussions focused principally on the basic monitoring requirements and methods recommended for LMIC to assess population dietary salt intake.

Conclusions reached were that:

- The best method to study levels of dietary salt intake remains open to discussion. The 24-hour urine method is considered as an accurate methodology, but can be cumbersome, resource-intensive and may not be within the resource capacity of all countries.
- More research is needed to assess simpler methods that can reliably measure salt intake in populations, since the use of spot urine testing may not be sufficiently accurate and reliable.
- Dietary recall methods underestimate actual salt consumption, however these can be acceptable methods for countries not readily able to perform 24-hour urine testing.
- The validity of results obtained from 24-hour urine testing depends on the full response of participants. Experiences from the field to facilitate cooperation include the use of financial incentives, use of novel aliquot containers, addition of thymol to neutralise odour, and starting and ending the urine catch at the testing centre.
- Robust design methods should be designed to avoid population bias and given a sufficient sample size also should also be able to detect social inequalities.
- Monitoring progress of reformulation activities by large multinational food companies needs to be integrated at international level.

# Conclusions and following actions

Population-based strategies to reduce salt intake must be multidisciplinary, intersectoral and implemented in several settings. Taking into consideration the existing national policies related to diet, nutrition and prevention of noncommunicable diseases, while being informed by the current evidence on reduction of disease burden and cost savings resulting from implementing the appropriate policies for reducing salt intake at the population level, the participants of the technical meeting identified the following key actions for four principal stakeholders: the World Health Organization; WHO Member States; NGOS, civil society and academia; and the private sector.

The participants recommended that actions build upon existing WHO strategies and plans, including, but not limited to:

- The Global Strategy for the Prevention and Control of Noncommunicable Diseases (7);
- The Global Strategy on Diet, Physical Activity and Health (10);
- The Prevention and Control of Noncommunicable Diseases: Implementation of the Global Strategy (9);
- The 2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases (11).

## *Actions identified for Member States:*

1. Ministries of health or the most appropriate government agency need to play a leading role in initiating and coordinating the development and implementation of policies aimed at reducing salt intake at population level.
2. A multisectoral and multistakeholder approach needs to be established, which involves relevant stakeholders in sectors such as health, food production and distribution, monitoring and surveillance, etc; to facilitate the development, implementation and monitoring of policies aimed at reducing salt intake at population level. This will involve:
  - a. Identifying baseline population salt intakes and the sources of salt that contribute most to this intake as this will allow more specific tailoring of salt reduction policies.
  - b. Setting realistic stepwise goals for reducing population salt intake over a specific timeframe.
  - c. In countries where commercially processed foods and meals are the main source of salt in the diet, developing, and subsequently reviewing on a regular basis, realistic salt reduction targets for all foods and condiments that contribute significantly to the levels of salt intake of a population. Set targets can be achieved through interaction with the private sector<sup>3</sup> using the nationally appropriate voluntary or regulatory approaches.

<sup>3</sup> Private sector includes, but is not limited to, the food and beverage industries, retailers, catering companies, small and medium size enterprises, advertising and recreation businesses, insurance and banking groups, pharmaceutical companies, the media and the trade associations that represent them.

- d. Developing and implementing a public awareness campaign focused on knowledge, attitudes and behaviours regarding salt and health. In countries where the main source of salt in the diet is salt added by consumers, the focus of the policy will need to be a public awareness campaign.
  - e. Establishing national guidance for best practices in public food procurement policies.
  - f. Developing key indicators for monitoring and evaluation of policies, plans and programmes aimed at population salt reduction.
3. A human resource capacity needs to be developed or improved. This will include health care personnel, according to specific national needs, to enable a wider knowledge base on the benefits of population sodium reduction.
  4. Work in partnership with other government departments, relevant NGOs, health, education and science organizations, UN agencies, donor agencies and the private sector to support policy development, adherence and implementation while ensuring consistent messages and transparency in collaboration, and minimizing conflicts of interest.
  5. Encourage and support, as appropriate, research activities relevant to population-based salt reduction strategies. Facilitate knowledge transfer and dissemination of research results to those who need to know.
  6. Look for opportunities to communicate and collaborate with other countries, through appropriate networks and country-to-country exchange, by sharing data and best practices for effective reduction of salt intake at the population level.
  7. Emphasize global responsibility in interaction with multinational companies and exporters in order to facilitate the reduction of salt consumption across borders.
  8. Review national regulatory mechanisms and implement, as appropriate, the set of recommendations on marketing of foods and non-alcoholic beverages to children, which was endorsed by the 63<sup>rd</sup> World Health Assembly in May 2010 (39).

### *Actions identified for WHO:*

1. Develop a guide for national action to reduce population salt intake.
2. Support Member States in the development, update and implementation of salt reduction policies and programmes.
3. Assist Member States in developing plans for resource mobilization to implement population-based salt reduction strategies.
4. Provide technical support to Member States seeking to establish a multisectoral and multistakeholder approach, involving relevant stakeholders in sectors such as health, food producers and distributors, monitoring and surveillance, etc; to facilitate the development, implementation and monitoring of policies aimed at reducing salt intake at the population level.
5. Provide technical support to Member States interested in developing multinational collaborative actions, partnerships or networks – as appropriate – aimed at population salt reduction strategies.
6. Continue to dialogue with relevant multinational private sector organizations to encourage product reformulation, and seek updates on private sector strategies and implementation of these pledges, strategies and commitments globally.
7. Continue to strengthen the information base system to include salt intake data and the salt content of food data.
8. Encourage Member States, international organizations and other UN Agencies (including CODEX) to develop and implement relevant nutrition standards, which include sodium content.
9. Encourage adoption of, and compliance with, national or international standards aiming at reducing sodium content in foods and meals for procurement of foods and meals that utilize public resources.
10. Assist Member States in implementing the set of recommendations on marketing of foods and non-alcoholic beverages to children, endorsed by the 63<sup>rd</sup> World Health Assembly (39).
11. Work with Member States to pilot approaches to salt reduction in LMIC, where the majority of salt is added during cooking or at table, from home produced foods or independent catering establishments, and disseminate successful outcomes.

### *Actions identified for NGOs, civil society and academia:*

1. Provide support for, and participate in, the development and implementation of effective technical guidance tools aiming to reduce salt intake at population level.
2. Advocate and assist the Government or national organizing body in the development, implementation, evaluation and monitoring of evidence-based salt reduction policies.
3. Support and reinforce the messages used by the Government or national organizing body related to consumer education and awareness regarding salt and health.
4. Encourage and contribute to mobilization of resources, both human and financial, for programmes aimed at population-based approaches for reducing salt intake.
5. Monitor the actions, commitments and pledges of private and public sectors that influence population levels of salt intake (“name and shame” or “name and praise” activities).
6. Develop and conduct research on population-based approaches to reducing salt intake, especially related to interventions implemented in LMIC and additional evidence on cost effectiveness.
7. Disseminate results of cost-effective, evidence-based interventions for reducing salt intake.
8. Mobilize the support of all relevant NGOs, professional associations, academia and civil society actors to develop a common agenda for reduction of salt intake.
9. Facilitate and support government’s efforts in the implementation of the set of recommendations on marketing of foods and non-alcoholic beverages to children, endorsed by the 63rd World Health Assembly (39).

### *Actions identified for the private sector<sup>4</sup>:*

1. All food manufacturers and producers (including the catering sector) need to set out publicly their plan to reduce salt in all products, prioritizing mainstream and biggest sellers.
2. Implement commitments for product reformulation across all markets, ensuring LMIC receive the same products and benefits of salt reductions as made elsewhere.
3. Ensure all new products developed are as low in salt as possible and as a minimum meet any salt reduction targets set for the food category.
4. Monitor progress of their plans and publish results.
5. Ensure the media messages related to salt and health and used in advertising, marketing and promotional activity are consistent with, and reinforce, those being provided by government agencies and NGOs.
6. Provide clear nutrition labelling and/or information at point of sale for consumers to facilitate informed choices across all markets.
7. Practice responsible marketing in accordance with WHO’s set of recommendations on marketing of foods and non-alcoholic beverages to children, endorsed by the 63<sup>rd</sup> World Health Assembly (39), or national recommendations on marketing of foods and non-alcoholic beverages to children.

<sup>4</sup> Private sector includes, but is not limited to, the food and beverage industries, retailers, catering companies, small and medium size enterprises, advertising and recreation businesses, insurance and banking groups, pharmaceutical companies, the media and the trade associations that represent them.

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# Annex 2

## Programme

### 1 July 2010 - Technical Meeting

<b>08:30–09:00</b>	<b>Opening</b> Introduction Dr Ala Alwan, WHO Mr Jeff Rooker, FSA
<b>09:00–10:00</b>	<b>Plenary 1. Why are salt reduction strategies effective?</b> Review of evidence of interventions – Professor Graham MacGregor. Cost effectiveness of salt intervention programmes – Dr Darwin Labarthe. International experience in implementing salt reduction programmes – the European Commission experience – Ms Stephanie Bodenbach.
<b>10:00–12:20</b>	<b>Plenary 2. How do you set up a salt strategy and how do you engage stakeholders?</b> Bangladesh: Dr Sohel Reza Choudhury Canada: Dr Hasan Hutchinson China: Dr Lian Cheng Zhao Finland: Dr Satu Mannisto Kuwait: Dr Nawal Al Hamad United Kingdom: Ms Alette Addison Unites States: Dr Sonia Angel
<b>12:20–13:05</b>	<b>Plenary 3. What is the role of regional networks in setting up a salt strategy?</b> PAHO Network: Professor Norm Campbell. European Salt Action Network: Dr Juan Manuel Ballesteros. Western Pacific Region Network: Mr Benjamin Lee Liang Chung.
<b>13:05–14:05</b>	<b>Lunch</b>
<b>14:05–16:05</b>	<b>Working Groups</b> Identifying critical success factors and barriers to implementation of a population strategy. Identifying critical success factors and barriers to engaging stakeholders.

<b>16:05–17:05</b>	<p><b>Plenary 4. Creating an enabling environment.</b>          Behaviour change research and how it can be applied to salt reduction – Dr Lynn Stockley.          School settings and peer education – Dr Patricia Mucavele.          Institutions – standards-setting and public procurement – Dr Louis Levy.</p>
<b>17:05–18:00</b>	<p><b>Plenary 5. A framework to monitor and evaluate implementation: WHO global strategy on diet, physical activity and health.</b>          Round table          Professor Francesco Cappuccio          Ms Alette Addison          Dr Hasan Hutchinson          Mr Henry Uitslag          Ms Vanessa Candeias</p>
<p><b>2 July 2010</b></p>	
<b>08:30–8:45</b>	<p><b>Resumé of previous day</b>          Rapporteur</p>
<b>08:45–10:20</b>	<p><b>Plenary 6. Designing a public awareness campaign.</b>          National experience of government led public awareness campaigns.          Australia: Ms Jacqui Webster          Chile: Dr Roxana Buscaglione          Hungary: Dr Eva Martos          United Kingdom: Mrs Victoria Targett          Kenya: Professor Elijah Ogola          Thailand: Dr Narong Saiwongse</p>
<b>10:20–10:40</b>	<p><b>Coffee break</b></p>
<b>10:40–12:40</b>	<p><b>Working Groups</b>          Identifying critical success factors and barriers to implementation for public awareness work.          Identifying critical success factors and barriers to creating an enabling environment.</p>
<b>12:45–13:45</b>	<p><b>Lunch</b></p>
<b>13:45–15:15</b>	<p><b>Conclusions, recommendations and following actions</b> – Mr Godfrey Xuereb, WHO.</p>
<b>15:15–15:30</b>	<p><b>Closing remarks</b> – Mr Tim Smith, FSA.</p>

## Annex 3

# Definitions and abbreviations

### Definitions

Publications refer to sodium intake as either mass or millimolar amounts of sodium, or mass of sodium chloride (salt) were

1g sodium chloride = 17.1 mmol of sodium

1g sodium chloride= 393.4 mg sodium

For the purpose of this report it should be noted that the term **salt** was used to refer to **sodium** and **sodium chloride**.

Hypertension is defined as systolic blood pressure of  $\geq 140$  mmHg or diastolic blood pressure  $\geq 90$  mmHg.

**Multisectoral approach** - an approach to an intervention that involves sectors beyond the health sector. In a multisectoral approach for a salt reduction intervention relevant sectors may include: health, education, nutrition, food production and distribution, food safety, communication, etc.

**Multistakeholder approach** - stakeholders are those who have an important information about an issue or policy area, who will be affected by a decision, or who may be able to affect a decision. In a multistakeholder approach for a salt reduction intervention relevant stakeholders may include: WHO and other UN Agencies, government (national, regional and local level), NGOs, civil society, professional associations, academia, private sector (food and beverage industries, retailers, catering companies, small and medium size enterprises, advertising and recreation businesses, insurance and banking groups, pharmaceutical companies, the media and the trade associations that represent them).

### Abbreviations

<b>AWASH</b>	Australian Division of World Action on Salt and Health
<b>ESAN</b>	European Salt Action Network
<b>EU</b>	European Union
<b>FAO</b>	Food and Agricultural Organisation
<b>FSA</b>	Food Standards Agency
<b>LMIC</b>	Low- and Middle-Income Countries
<b>NCD</b>	Noncommunicable Disease
<b>NGO</b>	Nongovernmental Organization
<b>PAHO</b>	WHO Region of the Americas
<b>UK</b>	The United Kingdom
<b>US</b>	The United States of America
<b>WHA</b>	World Health Assembly
<b>WHO</b>	World Health Organization
<b>WPRO</b>	WHO Western Pacific Region



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