

"SCHOOL POLICIES AND PROGRAMMES SHOULD SUPPORT THE ADOPTION OF HEALTHY DIETS AND PHYSICAL ACTIVITY"



SCHOOL POLICY FRAMEWORK

IMPLEMENTATION OF THE WHO
GLOBAL STRATEGY ON DIET,
PHYSICAL ACTIVITY AND HEALTH



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ISBN 978 92 4 150886 7



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World Health
Organization

WHO Library Cataloguing-in-Publication Data

School policy framework : implementation of the WHO global strategy on diet, physical activity and health.

1.Schools. 2.Exercise. 3.Nutrition. 4.Life style. 5.Health promotion. 6.Chronic disease - prevention and control.
I.World Health Organization.

ISBN 978 92 4 159686 2

(NLM classification: QT 255)

Acknowledgments:

This document resulted from the joint work of: Dr F Lagarde (University of Montreal, Canada), Dr CMA LeBlanc (University of Alberta, Canada) and Dr M McKenna (University of New Brunswick, Canada) and Dr T Armstrong, Ms V Candeias, Ms T de Bruin, Mr J Sattelmair, Ms D Siegel, and Mr N Thompson (World Health Organization, Geneva, Switzerland).

The inputs and comments provided by the participants of the expert round table on the DPAS School Policy Framework, held from 6–7 June 2007 in Vancouver, Canada, are gratefully acknowledged (please see list of participants in Annex 1).

WHO thanks the DPAS focal points in the WHO Regional Offices and colleagues from the departments Chronic Diseases and Health Promotion, Nutrition for Health and Development and Child and Adolescent Health in WHO headquarters for their support in the development of this document and comments provided through the electronic consultation process.

WHO also thanks all Member States that have contributed to the development of this document.

The expert round table on the School Policy Framework and the production of this document were supported financially by the Public Health Agency of Canada and Health Canada.

Photo credits, cover: Brenton Collas
Layout: Giacomo Frigerio

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CONTENTS

Introduction	1
Growing burden of disease	1
Mandate	1
Existing WHO initiatives on school health	1
Purpose and target audience	2
Expert round table	3
How to use this document	3
Starting a school policy	4
Set up a coordinating team	4
Conduct a situation analysis	5
Develop a workplan and monitoring system	6
Set goals and objectives	6
Dissemination	7
Policy options	8
School recognition	9
School curriculum	10
Food services environment	13
Physical environment	18
Health promotion for school staff	22
School health services	23
Stakeholder involvement	25
Government	26
Teachers and other school staff	27
Students	28
Parents and families	28
Community at large	29
Monitoring and evaluation	33
Types of monitoring and evaluation	33
Conducting monitoring and evaluation activities	34
Developing national indicators	35
References	38
Annex 1: Expert round-table participants	39
Annex 2: Country examples	41

INTRODUCTION

Growing burden of disease

Noncommunicable diseases (NCDs) are by far the leading cause of death in the world and their impact is steadily growing. In 2005, 35 million people died from NCDs which represents 60% of the total number of deaths in that year. Moreover, between 2005 and 2015, deaths due to NCDs are projected to increase by 17%. This largely invisible epidemic is more serious in low- and middle-income countries, where 80% of all NCDs occur.

The main causes of NCDs are known. A small set of common risk factors are responsible for most of the major NCDs; unhealthy diet, physical inactivity and tobacco use. Elimination of the modifiable risk factors would prevent 80% of premature heart disease, 80% of premature stroke, 80% of type 2 diabetes and 40% of cancer.

Children are not immune to this burden. Overweight children, and obesity and type 2 diabetes in children and adolescents are an increasing problem. Globally, nearly 22 million children under 5 years of age are overweight. Overweight and obese children are likely to stay obese in adulthood and more likely to develop NCDs like diabetes and cardiovascular diseases at a younger age.

Effective interventions are available and urgent action is required (1).

Mandate

In response to the growing burden of NCDs and in order to reduce the impact of major risk factors such as unhealthy diet and physical inactivity, the World Health Assembly adopted the "Global Strategy on Diet, Physical Activity and Health" (DPAS) in May 2004. As one measure, DPAS calls upon Member States to develop and implement school policies and programmes that promote healthy diets and increase levels of physical activity.

Paragraph 49 of DPAS states: "School policies and programmes should support the adoption of healthy diets and physical activity. Schools are encouraged to provide students with daily physical education and should be equipped with appropriate facilities and equipment. Governments are encouraged to adopt policies that support healthy diets at school and limit the availability of products high in salt, sugar and fats" (2).

Existing WHO initiatives on school health

Table 1 summarizes the main global initiatives of the World Health Organization (WHO) in the field of school health. The DPAS School Policy Framework builds upon this existing knowledge and experience. Moreover, the framework adds a global policy tool that focuses on governmental action to improve dietary patterns and increase physical activity in the school setting. National or sub-national school policies are expected to be of immense help to local schools in their efforts to promote healthy eating and physical activity.

TABLE 1: Global initiatives on school health in which WHO is a partner

INITIATIVE	GOAL	STAKEHOLDERS TARGETED
Global School Health Initiative (including different networks of health-promoting schools) www.who.int/school_youth_health/gshi	Increase the number of health-promoting schools (reward programme)	Schools
Focusing Resources on Effective School Health (FRESH) www.freshschools.org	Raise awareness in the education sector of the value of implementing effective school health programmes as a major strategy to achieve Education for All (advocacy)	Schools via ministry of health
Nutrition-Friendly Schools Initiative (NFSI) (in piloting phase) www.who.int/nutrition/topics/nut_school_aged	Increase the number of nutrition-friendly schools (reward programme)	Schools
Global School-based student Health Survey (GSHS) www.who.int/chp/gshs	Support Member States to measure and assess the behavioural risk factors and protective factors in 10 key areas among young people (surveillance)	Governments

Purpose and target audience

The purpose of the *DPAS School Policy Framework* is to guide policy-makers at national and sub-national levels in the development and implementation of policies that promote healthy eating and physical activity in the school setting through changes in environment, behaviour and education. This framework is one of the tools that WHO is producing and disseminating to assist Member States and stakeholders to implement DPAS.

The *DPAS School Policy Framework* primarily targets ministries of education and ministries of health, as in most Member States they are responsible for school health policies. Other ministries such as finance, agriculture, transportation, physical environment, sports, recreation, culture, and other stakeholders are however also encouraged to utilize this framework to improve eating and physical activity habits in the school setting. Depending on the local situation, policy-makers may operate at a national, sub-national, regional or local level.

The *DPAS School Policy Framework* is primarily intended for low- and middle-income countries, but many elements of the framework are also suitable for high-income countries. The document is intended for countries that have not started developing a school policy as well as for those that already have (parts of) a school policy.

Expert round table

In order to initiate the development of the *DPAS School Policy Framework*, WHO organized a meeting of experts on 6–7 June 2007 in Vancouver, Canada. The main objectives of this meeting were to review and discuss current knowledge and evidence of national and sub-national school policies on diet and physical activity, and to draft an outline for the *DPAS School Policy Framework*. As a follow-up to this meeting the participants of the expert round table (see Annex 1) reviewed drafts of the *DPAS School Policy Framework*.

How to use this document

This document describes the core elements of the development and implementation of a national or sub-national DPAS school policy. Chapter 2 describes how to start a school policy. Chapter 3 focuses on the different policy options available to policy-makers. Chapter 4 explains how to involve stakeholders. Chapter 5 provides guidance on monitoring and evaluation. Annex 2 includes examples of school policies in four WHO Member States.

Countries are encouraged to adapt the generic *DPAS School Policy Framework* in accordance with their own needs and circumstances. While it is not necessary to adhere strictly to the steps outlined in this framework, it is important to ensure that the core elements of the development and implementation of a school policy are included.

In the adaptation of the generic *DPAS School Policy Framework* to the local situation, countries are encouraged to directly engage children and adolescents. They possess immense potential for developing new, creative and, most importantly, appealing ideas for improving diet and physical activity behaviours in the school setting (see also the section on students in Chapter 4).

Each Member State is encouraged to establish its own priorities, in collaboration with all parties concerned, to decide the extent to which the components presented in the *DPAS School Policy Framework* are to be addressed. It is more important to start with small changes that are achievable than to wait until resources become available to address all of the components simultaneously.

STARTING A SCHOOL POLICY

Starting an effective school policy to promote healthy eating and physical activity requires national strategic leadership (3). Therefore, governments are encouraged to:

- set up a coordinating team to guide school policy development, implementation, monitoring and evaluation;
- conduct a situation analysis;
- develop a workplan and monitoring system;
- set the goals and objectives;
- disseminate the policy

Set up a coordinating team

It is important to ensure that a multisectoral coordinating mechanism, which draws upon existing structures, is present to promote healthy eating and physical activity in schools. The coordinating team should include members from all stakeholder groups (see Chapter 4), provide leadership at the national level and define mechanisms for internal leadership. The coordinating team should aim to facilitate and promote integration of joint work from all relevant stakeholders from all levels (national, regional and local).

Although the appropriate roles for the team are to be determined at the country level, a range of possible roles is proposed below.

- Facilitate the development and implementation of a national school policy, including resource mobilization.
- Take the responsibility to advocate and guide policies, actions (including research), and strategies implemented by various stakeholders.
- Coordinate actions of different stakeholders at various administrative levels (national, regional and local).
- Monitor different programmes aimed at promoting healthy eating and physical activity in schools and report on a regular basis.

The coordinating team should be accountable and transparent in its work. Leadership of the team may be joint or rotating e.g. between ministries of education and health, but should ultimately be left to the country to determine (4).

Conduct a situation analysis

Conducting a situation analysis is essential for the development of policies for healthy eating and physical activity in schools (5). By providing a baseline assessment of the reality in the school setting, a situation analysis will help the national coordinating team to better understand the needs, resources and conditions that are relevant to planning interventions. The following quantitative and qualitative information can help to determine needs and to plan healthy eating and physical activity interventions in schools.

- Current health status of students. Governments are encouraged to gather information regarding physical activity levels, fruit and vegetable consumption, school attendance, and prevalence of overweight students, obesity, diabetes, etc.
- Knowledge, attitudes, beliefs, values, behaviours and conditions of students associated with healthy eating and physical activity.
- Analysis of existing government programmes, as well as programmes organized by other stakeholders, that address promotion of healthy eating and physical activity in schools.
- Review of the information on healthy diets and physical activity in the school curricula.
- Available resources and current capacity in the country to promote healthy eating and physical activity in schools. This includes financial and human resources as well as the health infrastructure.

The health status of students can be assessed in schools, regions, and countries using standardized surveys. Two examples of student surveys supported by WHO are the Global School-based student Health Survey (www.who.int/chp/gshs) and the Health Behaviour in School-aged Children survey (www.hbsc.org). Information regarding existing programmes, policies and the preparation level of stakeholders can be collected through surveys, multi-stakeholder meetings and consultations, interviews and focus group discussions with various stakeholders and relevant parties.

It is important to act on the basis of the findings of the situation analysis. The analysis will reveal target areas for policy development. For example, the government may realize that physical activity requires more focus, or that primary schools should be targeted over secondary schools, or that policies implemented need to consider gender differences and be more gender-sensitive.

Develop a workplan and monitoring system

After forming a national coordinating team, determining its specific role, and conducting a situation analysis, the team is encouraged to develop a workplan to implement appropriate policies in schools. Such a workplan should include:

- setting goals and objectives
- selecting policy options
- implementing policy options with the support of stakeholders
- monitoring and evaluating the national school policy.

Monitoring and evaluation are vital in order to measure the effectiveness of policies put in place within schools. It is important to consider monitoring and evaluation at the beginning of the planning process and assign responsibility and appropriate funding. The monitoring and evaluation process should take place at regular intervals and make use of appropriate indicators (see Chapter 5).

Set goals and objectives

Using the information gathered in the situation analysis the coordinating team, in collaboration with relevant stakeholders, will be equipped to set goals and objectives. Goals and objectives are necessary to clarify what the interventions aim to achieve and to evaluate the extent to which the desired outcomes have been reached.

Goals can be defined as broad statements which describe the overall desired improvements related to healthy eating and physical activity in schools. Some examples of goals are:

- Provide favourable experience, sufficient skills and engrained behavioural patterns to lay the foundations for lifelong healthy eating and physical activity.
- Help students maintain or improve physical fitness.
- Reduce incidence of NCD risk factors among school-aged children and adolescents.

Goals are then broken down into specific process and output objectives and outcome objectives so that everyone clearly understands what needs to be done to achieve each goal, as well as when and why this needs to happen. These objectives should be SMART i.e. specific, measurable, achievable, relevant, and have a specific timeframe within which they must be achieved.

Process and output objectives describe what will be changed or implemented to achieve the outcome objectives. Examples of process objectives are:

- Set up in one year, a multistakeholder coordination mechanism, that includes representation from all relevant sectors.
- Have 250 schools rewarded as 'nutrition-friendly' within two years.
- Increase the percentage of schools that have daily physical activity classes as part of their curriculum from 50% to 70% within two years.
- Have a public awareness campaign on safety for children walking or cycling to school by the end of the year.

Outcome objectives are established to define what is to be achieved through the interventions with regard to healthy eating and physical activity. Examples of outcome objectives are:

- Increase the percentage of students aware of the health benefits of healthy dietary habits and physical activity from 40% to 70% in one year.
- Increase the percentage of students that walk or cycle to school from 5% to 15% within two years.
- Reverse the trend of increasing body mass index (BMI) in children within three years.

Dissemination

Wide dissemination of the national school policy is necessary for it to reach its target audience and promote healthy eating patterns and physical activity in schools. Dissemination of the policy document to all relevant stakeholders can be done through formal and informal channels. For example, an official memo can be sent to all schools distributing the policy. Key messages from the policy can also be disseminated through various channels including: print media, electronic media, regional/local events, influential individuals, role models, famous/popular individuals, advocates, etc.

Before a policy is ready to be disseminated, however, policy options need to be selected. The following chapter will provide guidance on selecting policy options.

POLICY OPTIONS

The next step in the development of an effective policy to promote healthy eating and physical activity in schools is to select and implement policy options. The general principles presented below provide guidance to policy-makers when developing and implementing a national policy:

- A school policy needs to be coherent with, and complementary to, existing policies and action plans such as health promotion and disease prevention.
- An interdisciplinary, integrated and holistic approach should be followed for policy development and implementation.
- Policy development and implementation should take into consideration cultural background, gender issues, ethnic minorities, and the jurisdictional and legal structure of the country.
- A school policy should be socially inclusive and participatory. All social classes need to be targeted, particularly the most vulnerable and the poor.
- A sustainable school policy should be developed with a specific budget allocated for its implementation.
- Whenever possible, implementation of a school policy may utilize and benefit from existing structures and resources (technical staff, civil society, information, ongoing initiatives, policies, etc).
- Evaluation and monitoring should take place throughout the whole process of policy development and implementation. Resources (technical and financial) for monitoring and evaluation activities must be allocated from the beginning to facilitate this.

In the following section several policy options are described. Policy-makers are encouraged to incorporate into their policy the most adequate and feasible options according to their needs, characteristics and resources. It is more important to start with small changes that are possible than to wait until resources become available to address all of these policy options simultaneously (5). Policy options adopted at national level should allow local flexibility for the implementation phase.

The suggested policy options are presented in the following categories:

- school recognition
- school curriculum
- food services environment
- physical environment
- health promotion for school staff
- school health services.

School recognition

Member States are encouraged to develop a programme that stimulates schools to promote healthy eating and physical activity and recognizes their efforts.

Suggestions for drafting the programme:

- Set criteria (which are consistent throughout the country) for awarding schools a special status recognizing their efforts to promote healthy eating and physical activity.
- Include specific and measurable outcome indicators for healthy eating and physical activity.
- Include a procedure by which schools can be evaluated against the criteria and awarded a special status.
- Re-evaluate schools that have already achieved a special status in order to ensure that they are making a continual effort to improve health.
- Set a target and date for both the number of schools involved in the national school recognition programme and the number of schools that have actually achieved the special status.

A school recognition policy is low-cost and relatively easy to implement. This policy option provides a way for Member States to show high-level commitment to promoting healthy eating and physical activity in schools. This will help to mobilize various stakeholders and gain support from members of government. Because it is often schools that are already active in this field that participate in these kinds of recognition programmes, countries are encouraged to try especially to engage schools that are not yet stimulating healthy eating and physical activity.

The NFSI (www.who.int/nutrition/topics/nut_school_aged) and Health-promoting Schools (www.who.int/school_youth_health/gshi) are examples of two WHO programmes that award schools a special status after they meet a number of predetermined criteria. Information available at these web sites may help Member States to develop their own school recognition programme.

Suggestions for the implementation of this policy option:

- **Develop criteria and procedures for awarding schools a special status.**
- **Mobilize schools to participate in the school recognition programme.**
- **Provide equipment/facilities and technical and/or financial support to schools wishing to participate in the school recognition programme.**

SPOTLIGHT: Health-promoting schools in Singapore

Recognizing the benefits of a holistic approach, the Ministry of Health in Singapore established a health-promoting school model entitled **Championing Efforts Resulting in Improved School Health (CHERISH)**. The CHERISH award aims to encourage primary and secondary schools to develop comprehensive school health promotion programmes. In the four years since its inception, more than 100 schools have implemented activities such as yoga instruction, health-related training courses for teachers, fruit days or fruit breaks, health camps, student excursions, purchase of exercise equipment and conducting surveys and/or health screening (see Annex 2).

School curriculum

Governments can use both health education and physical education classes (sports classes) to encourage healthy eating and physical activity.

Health education with focus on diet and physical activity

School health education aims to help students develop the knowledge and skills which are needed to make informed decisions, practice healthy behaviours and create conditions that are conducive to health (5). School health education can be delivered in a number of different ways, depending on a country's needs and available resources. It can be taught as a specific subject, as part of other subjects such as science, home economics, mathematics and agriculture, or ideally as a combination of both (5–7).

Health education policies that focus on diet and physical activity ought to:

- Provide knowledge and skills, and help to develop attitudes about the relationship between a good diet, physical activity, and health.
- Address the safe preparation of food and its consumption as an essential positive and enjoyable aspect of life.
- Allow students to have the opportunities to practice important skills, such as decision-making about food and physical activity.
- Allow students to identify not only barriers to being physically active and making healthy food choices, but also solutions to overcome the identified barriers.
- Provide media and marketing literacy to students, especially related to foods and non-alcoholic beverages.
- Involve teachers who have received the best possible training and are equipped with the knowledge and skills necessary to effectively impart health messages to students.

Suggestions for the implementation of this policy option:

- Develop, implement or strengthen a school curriculum that includes relevant information on healthy diets and physical activity.
- Establish partnerships with teachers, parents, teachers' associations, publishers, etc. to encourage the development of criteria and materials that provide an appropriate curriculum related to diet and physical activity.
- Consider, as appropriate, the development of a regulatory approach for compulsory health education during the school year.

SPOTLIGHT: The Cook Island health and physical well-being curriculum

The Cook Island health and physical well-being curriculum (CIHPWB) was developed between 2003 and 2004. The curriculum development and consultation process focused on two questions presented to students and adults on different islands:

1. What does being healthy mean to you?
2. What makes it hard to be healthy in the Cook Islands?

Using the results from the consultation process it was decided that five "key areas of learning" (KAL) would form the basis of the CIHPWB curriculum. These were mental health, sexuality, food and nutrition, body care and physical safety, and physical activity.

Implementation of the curriculum document has taken the form of:

- professional development – content and pedagogical knowledge
- resources to support the curriculum
- support in the planning, implementation and evaluation of programmes.

All schools have developed plans on how they will implement the two essential learning areas of the curriculum: a biannual health education plan and an annual physical education plan. The pilot was initiated in 2004 as a collaborative effort of the Cook Islands Ministry of Education and Health in Papaaroa School on the Island of Rarotonga.

Anecdotal evidence and formal evaluation in 2007 examining changes in students' health status (height, weight, blood pressure, and waist circumference), activity levels, dietary intake, dietary preferences and attitudes to healthy choices showed improvement.

Physical education and/or sports classes

Increasing the number of physical education classes and/or sports classes is one of the most direct policies to increase students' physical activity. Policy-makers are encouraged to ensure that:

- Physical education classes contribute to the overall daily physical activity of the students throughout the school years.
- The majority of the physical education class time is actually spent on physical activity. This includes aerobic/endurance, strength, flexibility, and coordination activities.
- A variety and choice of physical education classes is offered so that each student's age, gender, and disability needs and interests are taken into consideration.
- Physical activity is enjoyable, developmentally appropriate, promotes fair play and encourages maximum participation of all students.
- Pupils learn about physical activity and health, and develop the confidence and skills for lifelong participation in physical activity.
- Physical education teachers are well-qualified and properly trained.
- Adequate safety precautions are established and enforced to prevent injuries and illness resulting from physical activity.
- The undertaking or withholding of physical activity is not used as punishment.

Suggestions for the implementation of this policy option:

- **Promote and support, when appropriate, the use of local environments (e.g. beaches, hills, etc) and facilities (e.g. public parks) for physical education and/or sports classes.**
- **Provide adequate funding for physical education and/or sports classes, appropriate physical activity facilities and training for physical education teachers.**
- **Provide a national curriculum framework for physical education classes and consider, if appropriate, the development of a regulatory approach to make physical and/or sports education classes compulsory in schools.**

Food services environment

In order to support and facilitate the adoption of healthy eating habits in the school setting, it is recommended that the food services environment (school cafeterias, bars, vending machines, tuck shops, food brought to schools by students, etc) provides foods and non-alcoholic beverages that are high in vitamins, minerals and other healthy micronutrients, and low in fats, free sugars and salt.

The following policy options may be considered to ensure an encouraging food services environment:

- nutritional standards for school food
- school food programmes
- food service area
- vending machines and school snack bars
- food and non-alcoholic beverage marketing
- food availability near schools.

Nutritional standards for school food

Food served in schools should adhere to minimum nutrition standards based on national or regional dietary guidelines. The following are some general guidelines for healthy eating that, after adjusting for cultural specificities, could be considered for the development of national nutritional standards for schools (*adapted from 8*):

- A nutritious diet should meet the nutrient and energy needs of students and be based on a variety of foods originating mainly from plant-based sources.
- A variety of vegetables, fruits, whole cereals, bread, grains, pasta, rice or potatoes should be eaten, preferably fresh (for fruit and vegetables) and locally produced, several times a day.
- Fat intake should be limited to not more than 30% of daily energy and most saturated fats should be replaced with unsaturated fats. Trans-fatty acids should be avoided.
- The consumption of sugar and salt should be limited, while ensuring that all salt used is iodized.
- Sugary drinks and sweets should only be used with limited frequency, and refined sugar used sparingly.
- Fish and low-fat meat should be served for preference.
- Food should be prepared in a safe, hygienic and healthy way. Steaming, baking, boiling or microwaving helps to reduce the amount of added fat.

In various countries where meals are provided at school, 30% of recommended nutrient intake for age is used as a reference value to plan the content of the meals served. This proportion can also provide guidance for the provision of adequate serving sizes in school meals.

Suggestions for the implementation of this policy option:

- **Consider the development and implementation of nutrition standards for foods served in schools that are consistent with national or regional food-based dietary guidelines, as appropriate.**
- **Disseminate nutrition standards for foods served in schools in different communication formats to school staff, parents and students.**
- **Consider a wide range of options for the implementation of these standards including, if relevant, the adoption of a regulatory framework.**

School food programmes

School food programmes aim at increasing the availability of healthy food in schools. The programmes provide breakfast, lunch and/or snacks at reduced price or free of charge. Programmes may be available to all children or eligibility may be determined by economic or health criteria. Thus, within the same school, participants may receive a meal free, at a subsidized price, or at full cost. It is important to ensure that the meals provided are nutritionally adequate and in line with the nutritional standards for school food.

While many schools offer one meal, usually lunch, the importance of providing breakfast needs to be stressed. Breakfast can be provided to those children able and willing to be at school before classroom work starts (8). In various countries where breakfast is served at school, 20% of recommended nutrient intake for age is used as a reference value to plan the content of the meals served.

Suggestions for the implementation of this policy option:

- **Develop, implement or strengthen school food programmes or programmes for food distribution.**
- **Provide, in partnership with relevant stakeholders if appropriate, specific funds for breakfast, lunch and/or snack programmes. When public-private partnerships are established for the provision of meals at school, it is important to ensure that meals comply with the nutrition standards for schools or with national food-based dietary guidelines.**
- **Encourage and support schools to develop school gardens. Interact with relevant international agencies, such as the Food and Agriculture Agency of the United Nations (FAO), to mobilize additional support for the development of projects on school gardening.**

SPOTLIGHT: Home Grown School Feeding Programme

In ten African countries, the World Food Programme, together with ten national governments, the United Nations Children's Fund (UNICEF), FAO and the United Nations Millennium Hunger Task Force, started the Home Grown School Feeding Programme. The programme links school feeding with agricultural development through the purchase of locally/domestically-produced food, school gardens and the incorporation of agriculture into school curricula. The objectives of the programme are to reduce hunger among schoolchildren, increase school enrolment and attendance, improve the nutritional and health status of schoolchildren and stimulate local food production. More information is available at: www.wfp.org.

Food services area

The school food services area needs to be friendly and welcoming (8). A friendly food services environment consists of:

- multiple points of service in cafeterias to avoid long queues and to give students time to make food choices;
- clean eating area;
- adequate time for students to eat lunch;
- allocated time for students to socialize and play at recess, preferably before the lunch period;
- food provided in a non-stigmatizing manner, especially to students participating in free or reduced-price meal programmes.

Suggestions for the implementation of this policy option:

- **Set up or strengthen school food services.**
- **Mobilize stakeholders like catering companies, cafeteria workers, teachers and students to ensure that the cafeteria environment is friendly.**
- **Encourage the presence of a nutrition specialist in schools to, among other tasks, supervise the safety of foods and beverages served in schools and ensure compliance of all foods served with the nutrition standards for schools.**

Vending machines and school snack bars

School vending machines and school snack bars have been criticized for providing easy access to energy-dense, micronutrient-poor foods and beverages. In many schools, revenues from snack bars and vending machines are important sources of income for the school management. Foods and beverages provided in snack bars or vending machines should be consistent with nutritional standards for school foods and beverages or with the national dietary guidelines for school-aged children. In order to keep the source of revenue, policy-makers may encourage schools to replace energy-dense, micronutrient-poor products by milk, yogurts without added sugar, water, fruit juices without added sugar, sandwiches, fruits, nuts or vegetables. All of these may be good options to include in the range of products available in schools.

Suggestions for the implementation of this policy option:

- **Encourage schools to find culturally-relevant alternative sources of income, such as selling stationary materials or magazines.**
- **Where relevant, consider the use of financial measures to make healthy food and beverage options the most affordable item by students or to compensate schools that improve the content of vending machines.**
- **Consider, if appropriate, the development of a mechanism to limit the availability of energy-dense, micronutrient-poor foods and beverages offered through vending machines and snack bars, and to remove vending machines from the school setting.**

SPOTLIGHT: French ban on vending machines in schools

Since September 2005, France has banned all vending machines from schools with the aim to tackle childhood obesity. A specific law prohibits the sale of any food or drink via automatic vending machines. The ban on school vending machines came as part of a package of public health regulations, including plans to fine food producers who advertised 'junk food' without placing a health warning in the advert. More information is available at:
<http://www.sante.gouv.fr/adm/dagpb/bo/2004/04-33/a0332364.htm>

Food and non-alcoholic beverage marketing

There is good evidence that commercial advertising and marketing of high-fat, energy-dense, micronutrient-poor foods and beverages to children can have an impact on a child's food preferences, purchase behaviour and consumption. Marketing can also influence the school food supply as a result of school sponsoring schemes. Governments may therefore decide to implement a regulatory mechanism to avoid sponsorship, advertisements, and marketing of foods and beverages which are not consistent with healthy dietary practices (9).

Marketing and advertising can be found on:

- posters on school campus
- textbooks
- advertisements in school yearbooks and newspapers
- school supply materials, such as book covers or pencil cases
- sponsored equipment for school sports teams, stadiums, etc
- sponsored school events, school teams (e.g. quiz teams), exchange students or interschool competitions.

Suggestions for the implementation of this policy option:

- **If sponsorship of school events is required, encourage schools to find appropriate sponsorships from a wide range of commercial entities.**
- **Include media and marketing literacy as part of the school curriculum.**
- **Consider, if relevant and appropriate, the development of a mechanism to reduce the impact and/or avoid marketing and advertising of energy-dense and micronutrient-poor foods and beverages in the school environment.**

Food availability near schools

Efforts to create a health-conducive environment should also include food vendors that may be present on or near the school premises. In many countries there is a high concentration of fast-food restaurants near schools and a relatively low concentration of stores that sell fruits and vegetables.

Suggestions for the implementation of this policy option:

- **Consult with representatives of food and beverages producers during the development of the school policy to identify opportunities for action and to facilitate their commitment.**
- **Disseminate the nutritional standards for school foods to all food and beverages producers, vendors and distributors that operate in the vicinity of schools.**
- **Consider, if appropriate, the development of a mechanism to determine what foods and beverages can be sold in the vicinity of schools.**

Physical environment

The school's physical environment plays a significant role in determining whether interventions to promote healthy eating and physical activity will be effective and sustainable (5).

Elements that governments may consider are:

- buildings and facilities
- extracurricular activities
- safe walking and cycling to and from school.

Buildings and facilities

A school's facilities are a key factor if the implementation of physical activity policies is to be successful. These include the school building, the classrooms, recreation and sport facilities and the surroundings in which the school is situated. By improving the physical facilities in schools, policy-makers will encourage students to spend their recess time actively.

Suggestions for the implementation of this policy option:

- **Increase awareness among school staff that the school's physical environment is a key factor to increasing physical activity of students.**
- **Encourage and provide schools with safe and appropriate spaces and facilities so that students can spend their time actively.**
- **Provide guidance and support schools to establish partnerships with communities to open up and effectively utilize existing community recreation and sporting facilities, and vice versa.**

SPOTLIGHT: Inexpensive playground facilities in the United Kingdom

Physical activity facilities do not have to be complicated or expensive. Colourful playground markings in schools have shown to successfully encourage active play among children. A study of two elementary schools in a low-income area of the United Kingdom showed that multicoloured playgrounds are an effective low-cost method to encourage active games among children and increase children's daily physical activity. Other studies indicate additional benefits, including reduced incidence of playground fights, reduction of bullying and decreased levels of classroom disruptions (10).

Extracurricular opportunities for physical activity

Physical education classes offered by schools often do not meet the recommended levels of physical activity for children and adolescents (10). Extracurricular activities can help to supplement physical activity obtained in formal physical education classes. Extracurricular activities include any form of activity provided by schools other than formal classes, such as:

- comprehensive programmes of after-school gatherings offering physical activity opportunities, both competitive and non-competitive;
- active recess, morning, lunch or after-lunch exercises, traditional dances, etc;
- school sports competitions.

Additional benefits of extracurricular activities include the participation of students in a wider variety of activities and increased opportunities for cooperation between schools, students, parents and the community.

When developing a policy to promote extracurricular physical activity the following issues should be considered:

- Extracurricular activities should not substitute physical education classes.
- A variety of competitive and non-competitive activities, both individual and team activities, should be offered so that the maximum number of students' needs, interests and abilities are addressed.
- Students and the community should have access to adequate physical activity facilities.

Suggestions for the implementation of this policy option:

- See the 'Suggestions for implementation' box of physical environment as similar approaches can be taken to implement extracurricular opportunities.

Some additional specific recommendations:

- Encourage schools to organize interschools sport competitions.
- Mobilize parents and communities to organize extracurricular activities.

Safe walking and cycling to and from school

Walking and cycling to and from school presents a great opportunity for children and adolescents to be physically active on a regular basis (10).

Policies that promote safe walking and cycling include:

- crossing guards at road crossings to ensure students can safely get to and from school and take part in community sports and recreation;
- secure bike racks in school for students who choose to cycle;
- traffic-free zones in peak hours;
- safe walking and cycling trails, connected neighbourhood pathways and play areas;
- adequate lighting during hours of darkness.

Suggestions for the implementation of this policy option:

- **Establish partnerships with ministries of transportation, local councils, municipalities, communities, parents' and teachers' associations and traffic planners in order to create safer paths and advocate for walking and cycling as forms of transport.**
- **When appropriate, publicly commit to establishing safe routes for walking and cycling to and from schools, and support schools that are interested in contributing.**
- **Organize public awareness campaigns to alert the general population to the fact that students are walking and cycling to and from school.**

Health promotion for school staff

Health promotion for school personnel is important because teachers and other staff need to be aware of and responsible for the messages they give as role models to students and others. Furthermore, evidence suggests that promoting the health of school staff by encouraging physical activity and healthy diet may improve staff productivity and mood, and reduce medical/insurance expenses.

Health promotion for school staff can include:

- providing in-service training on healthy lifestyles
- disseminating printed materials from national or local organizations
- providing a staffroom with a healthy environment to eat and relax
- ensuring healthy meals are served in the school cafeteria
- providing healthy foods during breaks at staff meetings
- organizing workshops held by nutrition specialists and physical education teachers.

Suggestions for the implementation of this policy option:

- Mobilize stakeholders such as nongovernmental organizations (NGOs), local sports associations and the health-care community to organize activities on healthy eating and physical activity for teachers.
- Encourage schools' administrations to facilitate and support the implementation of activities related to health promotion for school staff.
- Provide funds for in-service training and some incentives for teachers to participate in additional training.

School health services

School health services help foster health and well-being as well as monitor, prevent, reduce, treat and refer important health problems or conditions of students and staff of the school (10). School health services can consist of a teacher designated to be responsible for healthy diet and physical activity monitoring, a trained school nurse or a school health team that includes a nutritionist or a diet/nutrition specialist.

Although not all governments can provide health services in schools, where resources are available the following services may be considered (5, 10):

- Regular measurement of body weight and height of students with a feedback system to parents. Schools that initiate BMI measurement programmes should adhere to safeguards to reduce the risk of harming students, have in place a safe and supportive environment for students of all body sizes, and implement strategies to promote physical activity and healthy eating.
- Nutritional screening and information collection relevant to participation in physical activity.
- Referrals to other school services and community health services based on results of the screening.
- Recommendations about physical activity for all students, including those with disabilities, and their parents.
- Counselling of students and their parents to promote healthy eating and appropriate levels of physical activity.
- In addition to providing these regular health services, health professionals may also be involved in research, monitoring and evaluation, education and advocacy.

Suggestions for the implementation of this policy option:

- Support the establishment of partnerships between schools and local health services to provide school health services at reduced or no cost to the school.
- Consider, as appropriate, the collection of information on body weight and height, and dietary and physical activity habits of all students at regular intervals. Encourage and support confidentiality and proper use of the data collected in schools.
- Give the school health team responsibility for supervising food safety of foods and beverages served in schools in compliance with the national nutrition standards for schools.

SPOTLIGHT: Physical examination of all students in Iran

In Islamic Republic of Iran, there is a mandatory physical examination for all students before entry to elementary, middle- and high school. In all cases feedback on the results of the screening and health anomalies (including low or high BMI levels) is given to parents and, if needed, students are referred to physicians. Since 2004, screening children at elementary school entry (including examination of all organs, optometry, audiometry, measurement of blood pressure, and assessment of IQ and mental health) has reached 100% coverage. This screening is conducted by the Ministry of Health & Medical Education and the Ministry of Education & Training. All services are provided to students without any charge. In addition, a complete medical examination is conducted on a yearly basis in most schools. All children with any health problem are referred to specialists, and parents must return the specialist's response to the school services.

Data from all provinces are stored in a national database and used by policy-makers to inform future policy development and implementation. Anecdotal feedback suggests that, overall, parents are cooperative and pleased to have the organized screening programmes conducted free of charge at school, and being informed of the results.

Further information can be found at:
www.emro.who.int/iran/programmeareas-schoolhealth.htm

STAKEHOLDER INVOLVEMENT

DPAS emphasizes the importance of active involvement of stakeholders in achieving its objectives. Paragraph 34 on the responsibilities for action states: *"Bringing about changes in dietary habits and patterns of physical activity will require the combined efforts of many stakeholders, public and private, over several decades. A combination of sound and effective actions is needed at global, regional, national and local levels, with close monitoring and evaluation of their impact."* In addition, paragraph 44 on the responsibilities of Member States, explicitly recommends that: *"Governments are encouraged to consult with stakeholders on policy. Broad public discussion and involvement in the framing of a policy can facilitate its acceptance and effectiveness."* (2)

Stakeholders are those who have important information about an issue or policy area, who will be affected by a decision, or who may be able to affect a decision. For the development and implementation of a national or sub-national DPAS school policy, where intersectoral and multistakeholder collaboration is key to success, stakeholders may include:

- governments (national, regional and local level)
- teachers and other school staff
- students
- parents and families
- community at large (including international organizations, NGOs and the private sector).

This chapter identifies potential stakeholders and the roles they may play. It summarizes potential facilitating factors and obstacles that may be encountered in the context of intersectoral action on a DPAS school policy. Finally it provides practical advice to ministries of education and health on how to involve other stakeholders.

Government

Collaboration of education and health ministries

The responsibility for school health is often shared between the ministry of education and the ministry of health. Regardless of which ministry takes the lead in starting a DPAS school policy, strengthened links between these ministries and sustained commitment to initiatives to improve diet and physical activity in schools is essential for the success and widespread adoption of a DPAS school policy.

Facilitating factors for collaboration between education and health ministries include:

- recognition of the potential for outcomes that benefit both sectors
- Implementation strategies that are feasible for both sectors
- existence of similar methods for monitoring and evaluation.

Conversely, collaboration between these ministries may be hindered by:

- vertical funding
- divergent views among different professional groups
- competing priorities and decision-making processes
- complex processes of engagement.

It is important for a government to analyse both the facilitating factors and possible obstacles in order to formulate an effective process for collaboration.

Other ministries and levels of governance

Depending on the policy options chosen, several other levels of government and various ministries may be needed to effectively implement a DPAS school policy.

- finance – funding of the DPAS school policy
- agriculture – school food services/programmes and school curriculum (including school gardens)
- transport – safe walking and cycling to and from school
- urbanization and planning – physical environment of schools
- recreation and sports – community sporting facilities and recreation programmes.

The policy developed and adopted at the national level will be implemented locally and therefore governments are encouraged to establish from the early planning stages, mechanisms to welcome and facilitate regional and local participation. Facilitating factors and obstacles for involving these other ministries and levels of governance will be similar to those for the collaboration of education and health ministries.

SPOTLIGHT: Agriculture in the classroom in British Columbia, Canada

An example of a programme in which the Ministry of Education and the Ministry of Agriculture join forces, is 'Agriculture in the Classroom' (AITC) in the province of British Columbia (BC), Canada (pilot phase). The purpose of AITC is to:

- **provide educational resources about agriculture**
- **enable students to make informed decisions about food choices, food safety and local food products**
- **promote careers in agriculture.**

AITC is represented by producers, agribusiness, teachers, Ministry of Agriculture, Ministry of Education, universities and a broad cross-section of the province's food industry. An example of a programme AITC has developed is the BC School Fruit and Vegetable Snack Program that delivers twice a week a fresh BC fruit or vegetable snack to schools. For more information: www.aitc.ca/bc.

Teachers and other school staff

Consultation with teachers and school staff about the planning and implementation of a DPAS school policy is essential as they play a central role in improving diets and physical activity in schools. The support of school directors or head teachers is crucial.

Teachers and school staff have a direct interest in a DPAS school policy as healthy diets and physical activity strengthen the learning potential and well-being of children. However it may be difficult to engage them actively in the development and implementation of a DPAS school policy. Obstacles for involving teachers and school staff include:

- lack of time to incorporate more duties into staff workloads;
- a misperception that time and attention given to healthy diets and physical activity will negatively impact academic standards/scores;
- lack of training;
- insufficient financial resources.

In order to overcome these obstacles and benefit from the knowledge, experience and involvement of teachers and school staff, countries are encouraged to:

- Involve teachers and school staff at an early stage in the development of the policy.
- Provide access to easy-to-use curricula that are included in or aligned with academic mandates and that appeal to students.
- Provide ample and effective training for "teachers in training", as well as current teachers and school staff.
- Nominate champions to motivate staff.
- Ensure support by school administrators.
- Involve teachers' unions to develop a DPAS school policy and convince peer teachers to implement the policy.
- Provide health screening for staff (e.g. measuring BMI, blood pressure, glucose, cholesterol, etc) and give free advice on healthy diets and physical activity.

Students

The inclusion of students during the planning and design of the DPAS school policy is important to ensure its feasibility and acceptability. Young people possess immense potential for developing new, creative and, more importantly, attractive ideas for improving diet and physical activity behaviours in schools.

Advantages of involving young people include:

- fresh ideas, unshackled by the way things have always been done;
- relevant information about young people's needs and interests;
- candid responses about existing services;
- more effective outreach that provides important peer-to-peer information;
- additional human resources as youth and adults share responsibility;
- greater acceptance of the policy because youth were involved in shaping it;
- improved competencies and increased self-esteem of youth directly involved.

In the past, students and youth in general have had few systematic opportunities to participate in policy development. However, their involvement can provide a win-win situation for participants and governments. Youth and student associations may be helpful partners for policy-makers when involving young people. Providing leadership opportunities for students, and identifying and articulating the expected outcomes of youth involvement will increase commitment.

Parents and families

Parents and other caregivers play an important role in a child's life as nurturers, teachers, disciplinarians, role models and supervisors. They control most of the food choices at home and their support positively influences physical activity among children and adolescents. By involving parents in the development and implementation of a DPAS school policy, children will be less likely to experience inconsistencies between suggestions and practices at home and at school.

Possible obstacles for involving parents include:

- lack of awareness of the importance of eating and physical activity behaviours;
- resistance to teachers or governments being involved with diet and physical activity practices in the household environment and therefore perceived as private;
- a misperception that time and attention given to healthy diets and physical activity may withdraw attention from more important subjects or may negatively impact academic standards/scores;
- lack of time and financial resources.

The nature of parental involvement in the development and implementation of a DPAS school policy can take several forms:

- Involve parents in identifying needs and concerns for the school setting and enable them to provide input into policy options.
- Organize focus groups with parents to discuss policy options to be developed and implemented on healthy diet and physical activity promotion in schools.
- Provide parents with information on the practical implementation aspects of the policy.
- Provide take-home materials and food samples.
- Organize DPAS-related workshops for parents.
- Engage parents in lobbying teachers, schools or decision-makers to improve diets and physical activity in schools.
- Encourage schools to make diet and physical activity patterns part of regular parent-teacher meetings.

Parents' associations are helpful partners to involve parents in the process of drafting and implementing a DPAS school policy.

Community at large

Community support and resources are vital for fostering healthy diets and physical activity in schools. The partners within a community can assist in creating awareness, publicity and visibility for healthy diets and physical activity. They can also contribute by endorsing, collaborating and co-sponsoring various programmes for young people.

Potential partners within a community include:

- health professionals
- international partners
- civil society
- non governmental organizations (NGOs)
- private sector, including farmers.

Health professionals

Health professionals can play a significant role in promoting healthy diets and physical activity in schools. As described in the previous chapter, introducing school health services is one of the policy options available to governments. Nurses, nutritionists, doctors, counsellors, and staff can help students to eat healthily and participate in appropriate levels of physical activity (see Chapter 3 for more information).

International partners

Many United Nations (UN) agencies and supranational agencies work on school-related programmes to improve healthy diets and physical activity. These agencies can foster the development of a national DPAS school policy by providing technical or financial resources.

Diet and physical activity related programmes by international partners include:

- Global School Health Initiative (www.who.int/school_youth_health) initiated by WHO
- Focusing Resources on Effective School Health (www.freshschools.org), a joint initiative from WHO, UN Educational, Scientific and Cultural Organization (UNESCO), UNICEF and the World Bank
- Nutrition-Friendly Schools Initiative (www.who.int/nutrition/topics/nut_school_aged), by WHO in partnership with Education Development Center, Food and Agriculture Organization of the United Nations (FAO), Standing Committee on Nutrition, UNESCO, UNICEF, World Food Programme and World Bank
- School gardening and nutrition education (www.fao.org/schoolgarden) by FAO;
- School feeding (www.wfp.org/food_aid/school_feeding) by the World Food Programme.

Civil society and NGOs

Civil society and NGOs have an important role to play in influencing individual behaviour, and behaviour of organizations and institutions that are involved in healthy diet and physical activity promotion in schools. They can also provide useful resources and act as a key community influencer (especially parents and families) in supporting healthy school policies.

In particular, civil society and NGOs can:

- participate in planning and health coordinating groups
- advocate that healthy diets and physical activity in the school setting should be placed on the public agenda
- form networks and action groups to promote the availability of healthy foods and possibilities for physical activities in schools
- organize campaigns and events that will stimulate the implementation of the DPAS school policy
- help coordinate and support school-based changes with activities undertaken in other settings such as homes, workplaces and communities
- provide resources and expertise.

SPOTLIGHT:

Through the collaborative efforts of the NGOs Insan Foundation-Pakistan and Right to Play, a physical activity programme addressing inclusion of women in play and sport activities was implemented in 14 Afghan schools and in two schools of Afghan and Pakistani children in Pakistan. The programme is focused on the inclusion of girls who had previously been culturally restricted from participating in sports and physical activity. Through consultation with community elders, play sites were modified and girls-only events were organized. The project was well received by teachers and students and physical activity is now an integral part of these schools. This programme is an example of how NGOs can support the implementation of policies that promote physical activity in culturally-sensitive ways. More information is available from: Right to Play Annual Report 2003 <http://www.righttoplay.com/site/DocServer/annualreport2003.pdf?docID=281>.

Private sector

The private sector can be a significant player in promoting healthy diets and physical activity in schools. Moreover, given the potential influence of a DPAS school policy on school food purchases and food and beverage availability in the school setting, this sector is likely to have a strong interest in being involved in the development of the policy. The interest of the private sector may however diverge from the government's public health interests. It is important for a government to acknowledge and recognize possible converging and diverging interests.

Potential actions that food producers and food distributors (farmers, catering companies, the food industry, restaurants, small and medium-sized enterprises that sell foods and beverages in or near schools, etc.) can take in a DPAS school policy include:

- offering health-related class visits to their farms, stores and factories;
- limiting the levels of fats, free sugars and salt in foods and meals (e.g. reformulate school menu options)
- offering cost-reduced options or donations for school food programmes;
- continuing to develop affordable, healthy and nutritious choices
- practising responsible marketing, particularly with regard to the promotion and marketing of foods with high content of fat, sugar or salt which are energy-dense and poor in micronutrients (e.g. vending machine practices in schools).

Potential roles for sport organizations, swimming pools, sporting goods manufacturers, recreation businesses etc. include:

- sharing physical activity facilities with schools
- offering physical activity equipment to schools
- encouraging pupils to join sports associations and similar organizations
- sponsoring school physical activity activities, sports events and equipment
- advocating the benefits of physical activity.

Potential roles for the media include:

- encouraging healthy eating and physical activity behaviours via all relevant channels (television, comics, magazines, internet-based media or even dance troupes)
- teaching the recognition of the purposes of advertising strategies such as those which provide information and those solely promoting a particular product.

MONITORING AND EVALUATION

Monitoring and evaluation are systematic processes to assess the progress of ongoing activities, identify constraints that need corrective action, and to measure effectiveness and efficiency of the outcome of the programme (11). Monitoring and evaluation provide information to policy-makers, and all interested stakeholders, on the implementation, progress, limits and effects of a policy. They can therefore assist in future planning and decision-making processes, contribute to the evidence base, and provide accountability (3).

A framework for evaluation should be developed in tandem with the policy. Policy objectives should be matched with the appropriate type of evaluation and adequate indicators should be used during the monitoring and evaluation process. For conducting monitoring and evaluation activities related to diet and physical activity policies, countries should use and build upon existing structures and surveys whenever possible and appropriate.

Types of monitoring and evaluation

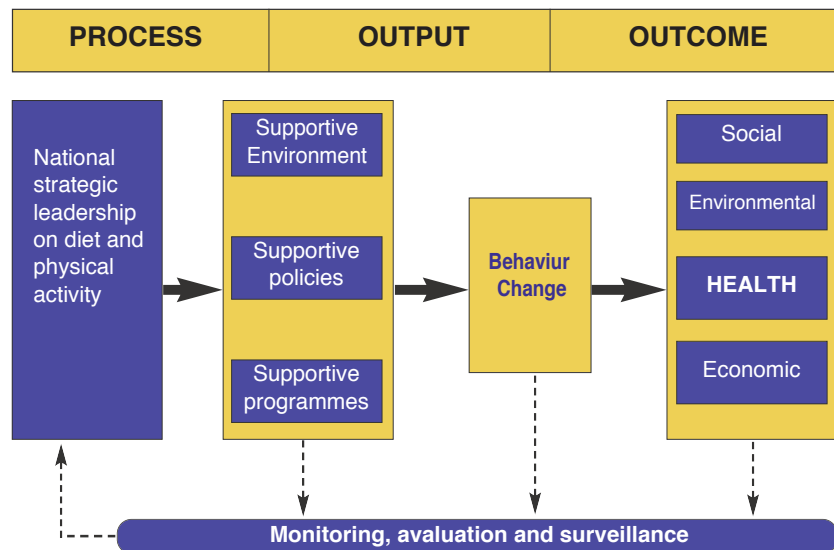
There are three types of monitoring and evaluation; process, output and outcome.

Process monitoring and evaluation is used to measure progress of the actual activities. It measures what has been done, rather than what has happened as a result. Output monitoring and evaluation is used to measure the outputs or products that come about as the result of processes. Process and output evaluation of the planning, development and implementation of the policies and programme provide information on which mid-course adjustments can be made. These two types of evaluation are considered together in this chapter.

Outcome monitoring and evaluation is used to measure whether, and to what extent, outcome objectives have been achieved. It is concerned with the effect of the interventions and helps to determine whether any changes have occurred following the implementation of a policy.

The scheme presented in Figure 1 aims to explain how policies and programmes, and their implementation, influence populations to change behaviour and realize longer-term social, health and economic benefits. The scheme suggests how adequate monitoring and evaluation indicators can be integrated into the process of change. It also shows when each type of evaluation should be considered in the process of policy development and implementation.

Figure 1 - Schematic model



Further information on the types of monitoring and evaluation can be found in the document "DPAS: a framework to monitor and evaluate implementation" available through the link: www.who.int/dietphysicalactivity/DPASIndicators.

Conducting monitoring and evaluation activities

To conduct monitoring and evaluation, it is important to have:

- A good understanding of the policy's goals, objectives and planned activities.
- A commitment to learning more about the strengths and weaknesses of the efforts and improving their delivery.
- At least one person who is willing to be responsible for monitoring and evaluation, who may receive some training in design and implementation of a monitoring and evaluation system.
- Assistance from a person trained in research or assessment, e.g. from the ministry of health or education or a local college, university or NGO; someone who has experience and can help develop an assessment plan.

Data for monitoring and evaluation can come from various sources: surveillance data (e.g. data collected in surveys such as the Global School-based student Health Survey and Health Behaviour in School-aged Children), policy documentation, policy-related communications, financial data, stakeholders, and direct measures or self-reporting.

Traditionally, outcome measurement involves data collection before and after implementation of the given policy or programme. It is recommended to use the same data items as collected during the situation analysis (see Chapter 2).

It is important to consider monitoring outcome indicators as part of a broader national surveillance and monitoring framework.

Developing national indicators

Indicators can be defined as variables which help to measure changes and which facilitate the understanding of how far the policy has come, where it is going and how far it is from its planned goals and objectives. The selected indicators should be reliable, valid, sensitive and in line with the type of evaluation being carried out.

The indicators provided in this section should be seen as examples to be used, as appropriate, after adjusting to country reality. The proposed indicators are intended to provide a simple and reliable tool for Member States interested in monitoring and evaluating the development and implementation of their national school policies.

The process and output indicators proposed in Table 2 are organized according to the chapters of this document. Suggested outcome indicators are presented in Table 3.

Examples of process- and output indicators

The data for the indicators suggested in the following tables can be collected at the national, sub-national, regional or local level. For some indicators, the collection of information from a statistically-significant number of schools may be considered.

Table 2 : Process and output indicators

STARTING A SCHOOL POLICY	EXAMPLES OF INDICATORS
Set up a coordinating team	<ul style="list-style-type: none"> ■ existence of a multistakeholder coordinating team to develop, implement and monitor the national school policy on diet and physical activity; ■ composition of the coordinating team (number of participants from the different parts and levels of government, teachers and school staff, students, parents and families, and community at large); ■ number of meetings of the coordinating team per year; ■ existence of a system that ensures accountability and transparency of the work of the coordinating team.
Conduct a situation analysis	<ul style="list-style-type: none"> ■ baseline information on outcome indicators such as: <ul style="list-style-type: none"> ■ % of students aware of the health benefits of healthy dietary habits and physical activity; ■ % of students who are not physically active for at least 60 minutes per day; ■ % of students who are overweight; ■ information collected during the situation analysis available to the national coordinating team.
Develop a workplan and monitoring system	<ul style="list-style-type: none"> ■ existence of a workplan to develop and implement the DPAS school policy; ■ existence of a specific budget line for monitoring and evaluation.
Set goals and objectives	<ul style="list-style-type: none"> ■ goals clearly identified; ■ process, output and outcome objectives clearly identified.
Dissemination	<ul style="list-style-type: none"> ■ DPAS school policy disseminated to all relevant stakeholders.

POLICY OPTIONS	EXAMPLES OF INDICATORS
School recognition	<ul style="list-style-type: none"> ■ existence of written criteria and procedure for awarding schools; ■ number of schools awarded; ■ percentage of re-evaluated schools that keep their award.
School curriculum	<ul style="list-style-type: none"> ■ existence of curriculum standards for health education with focus on diet and physical activity; ■ number of health education sessions per year within the national curriculum; ■ percentage of schools meeting health education curriculum standards; ■ existence of curriculum standards for physical education (sports classes); ■ number of physical education sessions (sports classes) per year within the national curriculum; ■ percentage of schools meeting standards for physical education (sports classes); ■ percentage of schools with qualified physical education teachers; ■ percentage of students 'excused' from physical education classes; ■ ■ percentage of physical education classes cancelled per grade level per year.
Food services environment	<ul style="list-style-type: none"> ■ existence of published nutritional standards for school foods and beverages; ■ percentage of schools providing children with food and beverages consistent with national standards for school food; ■ percentage of schools offering breakfast, lunch, fruit & vegetable or other snack programmes; ■ percentage of schools with school garden; ■ percentage of schools with a clean and supervised eating place; ■ percentage of schools with adequate period of time for lunch (at least 20 min after students arrive at the table with their food); ■ percentage of schools that have a food distribution system that ensures non-stigmatization of students, particularly to students participating in free or reduced-price meal programmes; ■ percentage of schools restricting the availability of vending machines; ■ percentage of products that are low-fat, low-sugar, low-salt and micronutrient-rich in vending machines; ■ percentage of schools restricting marketing and advertising of energy-dense and micronutrient-poor food and beverages; ■ existence and utilization of a national mechanism to monitor marketing and advertising activities in the school grounds.
Physical environment	<ul style="list-style-type: none"> ■ percentage of schools with a safe playground, play equipment etc; ■ percentage of schools providing daily active recess for all students; ■ percentage of children that stay inside during recess time; ■ percentage of school with a policy and programme to promote walking and cycling to and from school; ■ percentage of schools with safe "walk/cycling-to-school" routes; ■ percentage of children bussed to school; ■ agreement with ministry of transportation to improve walk/cycling routes to schools; ■ public awareness campaign on safety for children walking or cycling to school; ■ percentage of schools offering at least three extracurricular physical activity opportunities; ■ percentage of schools open after hours for community recreation; ■ agreement with local governments to share community recreation facilities with schools during school hours; ■ percentage of schools using community recreation facilities; ■ percentage of students actually participating in physically-active extracurricular activities.

Health promotion for school staff	<ul style="list-style-type: none"> ■ percentage of teachers who received education on healthy lifestyles in the previous year; ■ percentage of school staff using energy-dense micronutrient-poor food items to reward students.
School health services	<ul style="list-style-type: none"> ■ percentage of schools monitoring children's height and weight; ■ percentage of schools that use an effective feedback system for parents and children to report findings of the regular health monitoring activities; ■ percentage of students that use a counsellor for advice on healthy eating and physical activity.

Examples of outcome indicators

Most often a DPAS school policy will comprise different interventions. The following outcome indicators can be used to measure its total effect on student awareness, behaviour and health status. The outcome indicators presented in the table below are categorized as short, intermediate and long-term. This structure allows governments to monitor and evaluate different stages of the development and implementation of a national school policy.

Table 3: Outcome indicators

OUTCOME INDICATORS	EXAMPLES OF INDICATORS
Short - term (1–2 years)	<ul style="list-style-type: none"> ■ percentage of students aware of the health benefits of healthy dietary habits and physical activity; ■ percentage of students recalling positive messages about healthy eating habits and physical activity taught within school health education programmes.
Intermediate term (2–5 years)	<ul style="list-style-type: none"> ■ percentage of students eating less than 5 servings of fruits and vegetables a day or percentage of students eating less than 400g of fruits and vegetables a day; ■ percentage of children participating in at least 60 minutes of physical activity per day; ■ percentage of students who spent ≥ 3 hours per day sitting and watching television, playing computer games, talking with friends, or doing other sedentary activities during a typical day; ■ percentage of students walking or riding a bike to school during past 7 days; ■ percentage of students with a satisfactory school performance.
Long term (5–10 years)	<ul style="list-style-type: none"> ■ percentage of students who are overweight and obese.

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ANNEX 1: EXPERT ROUNDTABLE PARTICIPANTS

EXPERTS FROM ACADEMIA AND MINISTRIES OF EDUCATION AND HEALTH	
Dr Carmen Aldinger	Project Director, Education Development Center, United States of America.
Mr Eric Arnold	Policy analyst, Public Health Agency Canada, Canada.
Ms Louise Aubrey	Senior policy analyst, Public Health Agency Canada, Canada.
Dr Goof Buijs	Coordinator NIGZ School Programme, Institute for Health Promotion and Disease Prevention, The Netherlands
Dr Ji Chengye	Director, Institute of Child and Adolescent Health, China.
Dr Anniza de Villiers	Scientist, Medical Research Council, South Africa.
Mr Joe Doiron	Senior policy analyst, Public Health Agency Canada, Canada.
Ms Ann Ellis	Nutrition adviser, Health Canada, Canada.
Dr Roya Kelishadi (rapporteur)	Associate Professor of Pediatrics, Isfahan Cardiovascular Research Center, Isfahan University of Medical Sciences, Islamic Republic of Iran.
Dr Claire MA LeBlanc (author of background paper on physical activity)	Associate Professor of Pediatrics, University of Alberta, Canada.
Dr Mary McKenna (author of background paper on healthy eating)	Associate Professor of Kinesiology, University of New Brunswick, Canada.
Ms Sonia McGeorge	Co-director, British Heart Foundation National Centre for Physical Activity & Health School of Sport & Exercise Sciences, United Kingdom of Great Britain and Northern Ireland.
Ms Lisa Mawani	Policy analyst, Public Health Agency Canada, Canada.
Dr Ladda Mo-Suwan	Associate Professor of Pediatrics, Prince of Songkla University, Thailand.
Dr Lawrence St Leger	Associate Professor, School of Health and Social Development, Deakin University, Australia.
Ms Kelly Stone (chair)	Director, Division of Childhood and Adolescence, Public Health Agency of Canada, Canada.
Ms Patricia Walsh	Manager, Strategic Policy and Research, Public Health Agency Canada, Canada.

WHO SECRETARIAT

Ms Mathilde Elizabeth (Tilly) de Bruin	Technical Officer, Department of Chronic Diseases and Health Promotion, WHO Headquarters, Switzerland.
Dr Ulla Uusitalo	Technical Officer, Department of Nutrition for Health and Development, WHO Headquarters, Switzerland.

ANNEX 2: COUNTRY EXAMPLES

Chile - moving and eating well

Background

In Chile, the prevalence of obesity among children has risen sharply over the past two decades. Studies have shown increased consumption of snacks high in fat and sugars and low consumption of fruits and vegetables (1–4). Sedentary behaviour among children is also increasingly prevalent. The Ministry of Health of Chile, aware of the consequences of present trends and the related burden of disease on all Chileans, established Vida Chile in 1997, a national plan for health promotion. Although the scope of Vida Chile is population-wide, and its view of health is holistic, two of its five focus areas are healthy diet and physical activity. Its goals include, among others, to reduce sedentary behaviour in those 15 years of age and older, and to reduce obesity among schoolchildren in first grade from 16% to 12% by 2010. In addition to Vida Chile, the President of Chile launched in 2006 the Global Strategy against Obesity (EGO CHILE) to stabilize or decrease the current number of obesity cases.

Specific programmes

Government-spearheaded obesity prevention

Based on the experience of Health-promoting Schools in Chile, and taking into account the context of the Regional Public Health Plans, an intervention was started in 2007 to combine actions that contribute towards obtaining an impact on obesity and sedentary lifestyle. In order to use resources more efficiently and achieve better results, the Ministries of Education, Health and Sports are working together. Weight and height measurements of schoolchildren are obtained and those who are at risk of becoming overweight or obese are referred to the Primary Health Care Units to follow interdisciplinary obesity programmes and if possible undergo interventions in the family setting. In addition, healthy living programmes are implemented in schools. In the medium and long term, the objective is to insert several new themes and activities into the school curricula and into extracurricular activities with parents, teachers and pupils. Some examples: installation of healthy kiosks, implementing healthy snacks, active breaks in the playground, active pauses in the classroom and increasing the physical activity time in schools to meet the requirement of the Ministry of Education (3 hours per week). Finally, awareness is raised and teachers, parents and pupils are trained in healthy eating and physical activity in parents' meetings, celebrations and other occasions. In 2007, the government worked with 700 schools, increasing to 1000 in 2008.

National Lunch Programme

Intended to facilitate learning, not to counteract undernourishment, the National Lunch Programme provides selected students from 1 to 3 meals per day. Schools are given a grade point ranking depending on the socioeconomic status of the pupils, and individual students are thereby afforded meals providing 40 to 100% of daily energy requirement. Meal preparation is awarded to private caterers following a bidding process. The aim is to provide healthy foods, although fruit and vegetables are presently provided only 2 to 3 times per week.

Instituto de Nutricion y Tecnologia de los Alimentos (INTA)

INTA, an institute which belongs to the University of Chile, has long been proactive in addressing the concerns associated with obesity in schoolchildren. Specific initiatives include testing schoolchildren via anthropometric measurements, training teachers in the areas of physical activity and nutrition, increasing physical education time and implementing a "Recess with Music" campaign for which radios were purchased to play music in the school yard. INTA has also developed and distributed a guidebook to schools and the government, recommending the minimum measures schools ought to take in implementing physical activity and food regulations.

Monitoring and evaluation

INTA has conducted and published at least one controlled study measuring the efficacy of their interventions in primary schools in Chilean cities.

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Ghana

Background

The current School Health Education Programme (SHEP) was initiated following the 1990 World Conference on Education for All. In 1992, the Government of Ghana mandated the Ministries of Education and Health to introduce an integrated health education and health delivery service to complement academic components of formal education and child survival. The Ministry of Education was given the lead role, while the Ministry of Health provided technical support.

Vision: A well-informed healthy school population equipped with life skills, to maintain healthy behaviour, supported by a responsive health system.

Mission: To provide comprehensive health education and services, as well as ensure availability and use of water and sanitation facilities in schools.

Objectives: To ensure the provision of comprehensive health education in schools and to equip children with education in basic life skills to help them achieve and enhance their academic, psychological and physiological needs in life.

Specific programmes

Focusing Resources on Effective School Health (FRESH)

The FRESH framework has been adopted for the implementation of school health interventions through:

- *Skills-based Health Education:* Through curricular and co-curricular activities, pupils acquire knowledge and skills on assertiveness, decision-making etc. to make informed choices for healthy living. Capacity building workshops have been organized on the FRESH framework for SHEP Coordinators at the national, regional, district and school levels. Children participate in quiz competitions and health promotion campaigns in schools and communities.
- *Healthy School Environment Competition:* Since 2003 SHEP has been organizing Healthy School Environment Competitions in schools and awards given to deserving schools. The activities of this project include data collection on the state of the school's infrastructure and the dietary and physical activities practised in the school and the psychosocial environment, sensitization of school community, and award ceremonies.
- *School Health Services:* Health personnel, teachers and other stakeholders provide physical screening, counselling and referral services for pupils.

Promotion of the use of iodized salt in schools: In support of Government of Ghana's Universal Salt Iodization Initiative, SHEP collaborates with UNICEF and the Nutrition Unit of Ghana Health Service in the training of teachers and pupils on the use and benefits of iodized salt.

School Feeding Programme: In an attempt to ensure that school-aged children are well fed, the Government of Ghana has initiated two types of feeding programmes:

a) Take home ration for girls in schools in deprived communities in the three Northern regions.

b) Provision of one hot nutritious meal to primary-school children using locally-grown foodstuffs (Ghana School Feeding Programme GSFP). Currently over 400 000 pupils in 987 schools across the country are benefiting. In addition the World Food Programme collaborates with GSFP to support feeding of children in 34 districts in the three Northern regions. About 31 064 children are benefiting in the 34 districts.

Food and Nutrition: At the basic school level, topics on foods and nutrition are integrated into the school curriculum. At the secondary school level “Foods and Nutrition” is studied as a subject and it is examinable. In addition, training programmes are organized for school food vendors in food hygiene and nutrition. Food vendors are screened and certificated as medically fit before they are allowed to cook and sell on school campuses.

Regenerative Health and Nutrition Project: This is a new health policy direction initiated by the Ministry of Health, ‘shifting emphasis from cure to prevention’ in managing noncommunicable diseases. The project emphasizes increasing consumption of fresh fruits and vegetables, increasing intake of water, engaging in some form of moderate exercise and getting adequate rest.

Global School-based student Health Survey

The Ghana Global School-based student Health Survey 2007 was carried out to measure knowledge and behaviours, including dietary choices and physical activity, among Junior High School students across the country.

Physical exercise

The Ghana Education Service has a Physical Education (PE) Unit which organizes and supervises the overall PE activities in schools. Physical education is a subject carried out in the form of practical activities once a week in the first and second cycle schools, but not examinable. At the tertiary level, it is offered as a course. In addition, schools organize ‘inter-class’, ‘inter-house’, ‘inter-schools, and colleges’ competitions at which awards are given. There are also other traditional games which are informal physical activities like ‘Ampe’ (a game with two players that involves jumping and clapping of hands), hopscotch, local golf, sack race, musical chairs, drumming and dancing etc. which children enjoy playing and in the process undertake some form of physical activity. During break times at school children engage in these games after snack.

Monitoring and evaluation

Periodic monitoring and evaluation is conducted to assess the progress of school health activities in the regions, districts and schools. The regions and districts also submit quarterly reports on activities carried out.

Singapore – health-promoting schools

Background

The origins of school health promotion can be traced to the 1970s and 1980s when the Ministries of Health and Education worked together on the school health education syllabus and curriculum materials. Over the years the Ministry of Health offered a wide range of programmes addressing, among other topics, nutrition, exercise, smoking, and mental health. In addition, recognizing the benefits of a holistic approach, the Health Promotion Board (HPB) of the Ministry of Health established a health-promoting school model entitled “Championing Efforts Resulting in Improved School Health” (CHERISH), an award scheme to acknowledge those primary and secondary schools deemed as proactive. Policies and programmes dictated by the Ministry of Education affect all schools. Many schools have nonetheless added policies that contribute towards their individual status as a health-promoting school.

National policies and programmes

Curriculum

Health education is taught as a separate subject in the primary-school years, occupying a period of 30 min per week. In secondary school, health education features in various subjects, including nutrition taught in home economics. The Ministry of Education has collaborated with the HPB in developing specific modules and programmes for learning.

Exercise and physical fitness

All schools have physical education classes two or three times a week. Schools also organize mass physical activities such as sports days and game carnivals for their students. Additionally, many students engage in extracurricular activities after school hours.

The school tuck shop

Since the early 1990s, school tuck shops have practised a “green labeling” system by which green indicators are placed on the menu board to help students identify healthier food. All schools must also have water-dispensing machines in the ratio of 1:120 students. In addition, in 2003, the HPB introduced the Model School Tuck Shop Programme, an award scheme offering special designation to those schools that offer healthier food choices according to nutritional guidelines.

The CHERISH award

Modelled after the World Health Organization's health-promoting school initiative, the CHERISH award aims to encourage schools to develop comprehensive school health promotion programmes. Depending on the merit of their initiatives, schools may be awarded a platinum, gold, silver or bronze award. To partially reimburse the expenses incurred by a school to enhance a given project within the CHERISH award scheme, the HPB provides grants. In the four years since its inception, more than 100 schools have benefited, implementing activities such as yoga instruction or health-related training courses for teachers, fruit days or fruit breaks, health camps, student excursions, purchase of exercise equipment, and conducting surveys and/or health screening.

Monitoring and evaluation

The HPB facilitates the sharing of best practices among schools through regular presentations and discussion sessions, publishing books with exemplary school programmes, and updating HealthVine, an online e-newsletter for teachers. In addition, annual training courses are offered free of charge to school teachers. These courses both equip staff to plan and implement health-promoting initiatives, and provide feedback to the HPB on the schools' needs. As a further development, the CHERISH Award will adopt a two-year cycle, by which schools will be given more time to focus on needs assessment, planning, evaluation and review of their initiatives.

Future

While it has been a challenge applying a standard set of evaluation criteria to assess a heterogeneous array of schools, this has given HPB the confidence to develop a customized health-promoting school model for polytechnics and universities as well as address the approach for kindergartens. Since the early days of health-promoting schools in Singapore, the Ministry of Education has evolved in its role, and now co-leads with the HPB. Both organizations look forward to more educational institutions aspiring towards and achieving health-promoting school status.

Slovenia - aiming for healthy schools

Background

Findings on health-related behaviour of children and adolescents in Slovenia reveal that poor eating habits and low levels of activity are public health concerns. The proportion of children and adolescents with high body weight is increasing in Slovenia as in other European countries.

Specific initiatives

The National School Nutrition Programme (NSNP)

One morning meal/snack is provided daily as part of the national programme. Funding is provided by the Ministry of Education and Sport so that each child must cover the cost of the raw food ingredients only. Additional meals are available, and are administered under a non-profit programme. The catering manager is the key figure in ensuring that policy leads to practice. In addition, he or she is often the home economics teacher, and thus responsible for fulfilling the nutritional components of the curriculum.

Resolution on Food and Nutrition Policy from 2005 to 2010 (ReNNPP)

Although the scope of the ReNNPP, spearheaded by the Ministry of Health, extends beyond school-aged children, one of its main objectives is to reduce the prevalence of obesity among children and adolescents. Specific activities include, among others, specifying the contents of school vending machines, recommending a hygienic supply of drinking water for schoolchildren, and introducing school milk subsidies.

The Slovenian Network of Health Promoting Schools (SNHPS)

Established in 1993 with cooperation between the Ministry of Health and the Ministry of Education and Sport, the SNHPS built a framework to integrate health-promoting approaches through the development of school curricula and interactive and participatory teaching and learning methods. Both nutrition and physical activity are listed as intensive focus areas. One quarter of Slovenian schools are now part of SNHPS.

Apple in the school project

Apart from the National School Nutrition Programme, the Ministry of Education finances the purchase of apples so that pupils are provided with three fruit servings per week in addition to the fruit already included in school meals. Twenty-six elementary and 25 secondary schools are included in the project.

Curriculum revision

Several workshops were prepared by the National Institute of Public Health and regional institutes to empower secondary-school teachers to include nutrition and physical activity topics in their teaching. In addition, two health education programmes on body weight and physical activity are in development. The aim of the programmes is to equip adolescents with knowledge of normal body weight and the importance of physical activity.

National campaign “Enjoy!”

Launched by the Ministry of Health in October 2004, in conjunction with World Food Day, activities were carried out at a variety of levels and in different environments, including in schools and kindergartens. The campaign included the promotion of physical activity and eating five portions of vegetables and fruits per day.

Monitoring and evaluation

No formal schedule for review/revision was identified. Nevertheless, in the case of the NSNP, the aims and target population have evolved since its inception in 1950. The Programme that began as a means of improving nutritional deficiencies strictly in primary-school students now endeavours to promote health, improve bad dietary habits, and provide nutrition education to a broader range of pupils and their families. Furthermore, policy-makers have identified future goals, not only for the NSNP, but for all stakeholders involved in the promotion of diet and physical activity among children and adolescents.