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**COMMISSION STAFF WORKING DOCUMENT**

*accompanying the*

Proposal for a

**COUNCIL REGULATION**

**amending Regulations (EC) No 1290/2005 on the financing of the common agricultural policy and (EC) No 1234/2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation) in order to set up a School Fruit Scheme**

**Impact Assessment**

{COM(2008) 442 final}  
{SEC(2008) 2226}

# COMMISSION STAFF WORKING DOCUMENT

## School Fruit and Vegetables Scheme (SFS)

**Lead DG:** DG AGRI

**Other involved services:** SG, DG BUDG, DG COMP, DG EAC, DG ECFIN, DG EMPL, DG ENV, DG REGIO, DG RTD, DG SANCO, DG TRADE, ESTAT.

**CLWP 2008 reference:** 2008/AGRI/004

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## LIMITATIONS IN AVAILABLE DATA

In the elaboration of this Impact Assessment, several obstacles related to data collection and processing have been encountered.

### **Consumption data**

As regards consumption of fruit and vegetables "apparent consumption" is used as the most accurate approximation available throughout the report. Apparent consumption is elaborated from production and trade (plus import, minus export) data. Losses occurring on the wholesaler level are estimated based on information provided by the sector, but losses on other levels of the supply chain until the end consumer such as "on field", during transport and distribution and "home losses" can not be assessed. As fruit and vegetables are highly perishable products, these losses can be substantial.

Therefore, the calculations of apparent consumption in the report over-estimate effective consumption. For instance, there is a 15% difference between this reports calculation and the conclusion of a French study estimating the real intake of a sample of the population (respectively 405 and 350 grams per day).

No global data on child consumption of fruit and vegetables is available. However, the Pro-Children project financed by the DG Research measured the fruit and vegetable intake in children in various Member States and found that in average only 17.6% of the 11-year old children reached the recommended minimum level of 400 grams a day.

### **Scientific evidence**

The effectiveness of a possible SFS is based on the available scientific literature, as well as the evaluation of existing school fruit schemes. Yet, since they are recent, underlying time series of these studies tend to be rather short and results may be only short-term conclusions. The degree of the long-term impact still needs to be assessed.

### **Fruit and vegetable intake as a piece of the puzzle**

Obesity and related diseases are not only linked to fruit and vegetables intake but more generally to overall diet and lifestyle. It is difficult to model the link between fruit and vegetables consumption and obesity and therefore to quantify to what extent a European SFS could result in health savings in the future.

Furthermore, as available data shows, high consumption of fruit and vegetables is not a guarantee in itself in solving the obesity problem. Therefore, a School Fruit Scheme at European level should not be seen as a panacea for obesity, but rather a contribution to help alleviate a complex problem.

## 1. EXECUTIVE SUMMARY

This Impact Assessment Report is presented in the context of the Reform of the Common Market Organisation of Fruit and Vegetables (COM(2007) 17) of September 2007, and of the Commission White Paper on “A Strategy for Europe on Nutrition, Overweight and Obesity and related health issues”. The "White Paper" stresses the need for coherent action in this respect, draws attention to the role which the CAP could play in shaping a healthy diet, and states that “*a School Fruit (and vegetables) Scheme would be a step in the right direction*”.

When approving the Fruit and Vegetable reform, the Council “invited the Commission to come forward with a proposal for a Fruit (and vegetables) School Scheme ... based on an impact assessment of the benefits, practicability and administrative cost involved.” The European Parliament, in its report on the EU draft general budget for 2008, “re-emphasised its strong commitment to the proper budgetary endowment of funds for school fruit and vegetables ...; and called on the Commission to put forward a legislative proposal”.

Work on the Impact Assessment has been entrusted to an Inter-Service Group (ISG) made up of representatives of the Commission services concerned. During the process, extensive recourse was made to stakeholder consultation, which comprised meetings with concerned parties, participation in events, the creation of a website and an online public consultation. The findings of the consultation were taken account of in the drafting of the Impact Assessment.

The problem to be addressed has been identified in economic and health terms, and reinforced by a social dimension. The consumption of fruit and vegetables in most EU Member States has been falling and on average does not reach the World Health Organisation minimum net recommended intake of 400 grams a day. The situation is particularly worrying among children. Further a low intake of fruit and vegetables affects negatively the market for fruit and vegetables and contributes to poor diet which in turn is one of the key elements of obesity, long recognised as causing several diseases. This problem tends to affect to a greater extent lower socio-economic groups, and poorer regions of the EU.

Given the above, the overall objective of a School Fruit (and vegetables) Scheme at EU level is specified as to provide a policy and funding framework for Member State initiatives aimed at durably increasing the share of fruit and vegetables in the diets of children, at the stage when their eating habits are formed. This would represent an investment in the future, by helping to avoid or reduce health expenditure resulting from poor diet. Furthermore, the positive impact on consumption could contribute to meeting CAP objectives as laid down in Article 33 of the Treaty. A set of complementary and mutually supportive specific objectives reflecting the economic, health and social aspects of the overall objective has been formulated in order to address the issue at stake.

In the course of collecting expertise and analysis it became apparent that, if properly implemented, School Fruit Schemes are effective in achieving these goals. In particular, it is proven that a School Fruit Scheme should not only (some say even not mainly) concentrate on the provision of fruit and vegetables at school but also include a set of accompanying measures aimed at awareness rising.

Based on the above considerations, the ISG identified four options to meet the stated objectives, listed in order of increasing EU financial involvement:

- Option 1 “Status Quo” – no policy change scenario; ongoing activities at EU and MS level are judged sufficient;

- Option 2 “Networking” – Commission action to foster exchange of experience and know-how transfer among project promoters in Europe (estimated cost: EUR 1.3 mio/year);
- Option 3 “Supporting Initiatives” – co-financing initiatives for the promotion of fruit and vegetable consumption in schools. EU funding of product purchases would be excluded (the reform of the fruit and vegetables CMO includes an increase of the EU budget by EUR 6 mio which could be used for this purpose)
- Option 4 “Driving Initiatives” – a framework comprising: provision of fruit and vegetables in schools to a core target group of 26 mio children in the 6-10 age group and accompanying measures financed mainly by MS (integrating health and educational goals). The purchase of fruit and vegetables (including logistics) would be 50% co-financed by the EU (75% in convergence regions). The EU budget cost is estimated at EUR 90 mio. An evaluation could be foreseen after 3 years, based on the experience gained, in order to establish whether changes are necessary.

Based on the analysis of impacts of all four options it has been concluded that Option 4 is the most effective way of achieving the stated objectives of increasing consumption and improving health, if its implementation respects the subsidiarity principle and national competences, in particular on health and education. Its effectiveness and multiplier effect would be increased if complemented by both options 2 and 3.

In this context it is proposed to set up a School Fruit Scheme which, for maximum effectiveness, brings together the 3 options in a mutually supportive package. It comprises the following elements:

- **free distribution of fruits and vegetables** in schools (as part of option "driving initiatives). Community aid should be granted to co-finance the supply of fruit and vegetables to pupils in educational establishments, the related logistics and monitoring and evaluation. For this purpose, it is proposed to provide for a budgetary allocation of a total amount of EUR 90 million under Title I of Council Regulation (EC) No 1234/2007. It would allow for the extension of existing SFS in some Member States, and the establishment of programmes in MS without such programmes, often due to limited budgetary means. The Community co-financing rate would be at the level of 50% and 75% in convergence regions.
- **accompanying measures.** An obligation for Member States to develop a national strategy in consultation with public health and education authorities, industry and interested stakeholders. The strategy should lay down in which manner a School Fruit Scheme could be best implemented and integrated into the school curriculum. As part of the implementation it would be an obligation to highlight the EU involvement. The accompanying measures would primarily be nationally financed;
- **networking activities**, in order to motivate the exchange of information and knowledge among SFS actors and stimulate public awareness (as presented in option 2 "networking"). This allocation should amount to EUR 1.3 million;
- **promotion of agricultural products**, which could be supported in the framework of the EU promotion of agricultural products (as presented in option 3 "supporting initiatives"). In particular, MS could use this framework to carry out the necessary accompanying measures aimed at raising awareness on the beneficial effects of fruit and vegetables consumption. The recent fruit and vegetables reform increased the indicative the indicative budget for the promotion of these products by EUR 6 million;

- **monitoring and evaluation.** With the purpose of establishing solid data for further research on the effectiveness of a School Fruit Scheme in its different variants and for the exchange of "best practices", monitoring and evaluation should form an integral part of an EU scheme.

All schemes would consequently include the three elements:

- the free distribution of fruit (and/or vegetables) in schools,
- a series of accompanying measures,
- monitoring and evaluation.

If no action is taken in the form of an EU SFS, the effect on fruit and vegetable consumption by children will depend on the financial resources made available nationally and accompanying actions. Those MS that have the necessary budgetary resources will set up a SFS with a tangible effect on consumption and consequent positive health effects. If the action is limited, as has hitherto been the case, the positive effects would equally be limited. MS with insufficient budgetary resources and where no SFS is in place will not be encouraged to set up a SFS if there is no EU budget contribution. The continued unbalanced development of SFS among Member States would have consequent negative impacts on social cohesion and equal opportunities.

A single EU framework for a School Fruit Scheme equipped with financial resources and accompanying measures could provide a contribution to solving the complex problem of child obesity, of which low consumption of fruit and vegetables is only one element. Such a programme should be seen as an investment in the future, where the benefits would increasingly show up over time by educating future consumers and implicating change in consumption habits, not just of children but also of their families and their teachers. Only experience will show if the budget available is appropriate to achieve the set objectives.

## **2. PROCEDURAL ISSUES AND CONSULTATION PROCESS**

The work on the Impact Assessment for a possible School Fruit Scheme (SFS) was entrusted to an Inter-Service Group (ISG) made up of representatives of the Commission services concerned. Representatives of 13 Directorates General and Commission Services<sup>1</sup> participated in the work of the group, which met seven times from September 2007 to April 2008. The mandate of the ISG, which the group approved on 25 October 2007, is provided in Annex 2.

During the Impact Assessment process, extensive recourse was made to stakeholder consultation, as summarised below. In-depth analysis of similar policies that already exist at EU level, driven by DG Agriculture and Rural Development and of School Fruit Schemes implemented in the Member States have served as examples and provided experience-based data for this report and the options developed.

In addition, the Impact Assessment has referred to the extensive literature on the subject of School Fruit Schemes, health and social issues. An indicative bibliography is given in Annex 3.

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<sup>1</sup> See Annex 1.



## **2.1. Meetings with concerned parties**

On 24 September 2007 academic, NGO and Government experts participated in a hearing, where they shared their experience with representatives from the agriculture and related sectors. Following a presentation on child obesity issues, case studies from nine Member States were presented, to help identify possible models for an EU School Fruit (and vegetable) Scheme (SFS) and the added value that could be offered by action at EU level. A round table of stakeholders provided an overview of their expectations from a possible SFS.

From 30 September to 3 October 2007 members of the ISG made a study trip to Denmark to collect information on the operation of a national SFS.

On 23 November 2007 and 11 December 2007 the ISG presented four draft options for a possible SFS to, respectively, the Fruit and Vegetables Advisory Committee and the Fruit and Vegetables Management Committee, in order to gather the opinions of Member States and sector representatives. Presentations were made of several SFS already operating at national level.

On 31 March 2008 the ISG secretariat went on a fact-finding mission to England, where they met representatives of the Department of Health on scientific evaluation, the Management Authority and supplier of produce to schools.

## **2.2. Participation in events**

In order to make further contact with interested organisations and members of the public, DG AGRI representatives participated in a number of events in Member States. As well as offering an opportunity to inform stakeholders and the general public about the Impact Assessment exercise, these occasions provided the possibility of developing an active dialogue with the concerned sectors.

Feedback from these events has been important to the Impact Assessment process and the conclusions drawn in this report. A full list of the events attended is provided in Annex 4.

## **2.3. Online public consultation and website**

Early in the process, a new page devoted to the SFS Impact Assessment was established on DG Agriculture's website. This was updated regularly with information and presentations from the various events and meetings.

On 18 December 2007 a broad public online consultation<sup>2</sup> was launched on the website, on the four options agreed by the ISG for a possible EU-level School Fruit Scheme. The public consultation closed on the 29 February 2008. 122 contributions were received from respondents in Member States, as shown on the map in Section 4.2.

The answers to the questions posed in the consultation have been taken into account in the elaboration of this report. This is especially the case for the four options<sup>3</sup>, which were re-

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<sup>2</sup> See Annex 5 for the consultation document.

<sup>3</sup> During the consultation process the options were slightly adapted to make them clearer. Unfortunately this was not fully understood by the interested public. As a result, we received two reactions which showed that the changes had been misunderstood.

drafted after the consultation and subsequently developed as essential elements of this final report.

A summary is provided in Annex 6 and relevant statistics in Annex 7. All the contributions have been made available on the SFS website<sup>4</sup>.

## **2.4. IAB opinion**

The draft Impact Assessment report was submitted to the Impact Assessment Board (IAB) on 29 April 2008. The IAB held a hearing on the subject on 21 May 2008 which was followed by the submission of its detailed opinion on 23 May 2008. The main recommendations for improvement concerned the reasons for and value added of a School Fruit Scheme at EU level; the problems should be explained more clearly and realistic objectives set accordingly. A more explicit demonstration of the cost-effectiveness and proportionality of the preferred option was also requested.

Following the submission of a revised version on 28 May, fully taking into account the request of the IAB, the IAB issued yet another opinion on 10 June 2008. While welcoming the improvements that had been made, some further adjustments were requested such as a more detailed description of the implementation mechanism, the budgetary and administrative impact, coherence between objectives and criteria of assessment, improving the presentation of facts on scientific evidence and lessons learned, so to in general create a more stand-alone version of the document, by also integrating elements of the annexes into the main text.

Subsequently, the Impact Assessment Report has been again substantially revised to take account of the IAB's comments and suggestions.

## **3. PROBLEM DEFINITION**

### **3.1. The context**

In September 2007, the European Union adopted a wide-ranging reform of the Fruit and Vegetable regime<sup>5</sup> to promote the competitiveness and market orientation of this sector and bring it more closely in line with the general principles of the reformed Common Agricultural Policy (CAP). One of the key objectives of the reform is to reverse the declining consumption of fruit and vegetables.

The importance of fruit and vegetables consumption as part of a healthy diet is advocated by the Commission White Paper on 'Nutrition, Overweight and Obesity'<sup>6</sup>, which stresses the need for coherent action at European level and draws attention to the role the CAP could play in shaping the European diet, especially to combat obesity and overweight. It states that "*a School Fruit Scheme would be a step in the right direction*".

When approving the Fruit and Vegetable reform, the Council issued the following declaration<sup>7</sup>: "*In light of the dramatic increase in obesity amongst school children, which has been highlighted in the recently published Commission White Paper (...) the Council invites*

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<sup>4</sup> [http://ec.europa.eu/agriculture/markets/fruitveg/sfs/index\\_en.htm](http://ec.europa.eu/agriculture/markets/fruitveg/sfs/index_en.htm)

<sup>5</sup> [http://ec.europa.eu/agriculture/capreform/fruitveg/index\\_en.htm](http://ec.europa.eu/agriculture/capreform/fruitveg/index_en.htm).

<sup>6</sup> [http://ec.europa.eu/health/ph\\_determinants/life\\_style/nutrition/keydocs\\_nutrition\\_en.htm](http://ec.europa.eu/health/ph_determinants/life_style/nutrition/keydocs_nutrition_en.htm).

<sup>7</sup> Council declaration in the framework of the fruit and vegetable reform, 15 June 2007.

*the Commission to come forward with a proposal for a school fruit scheme as soon as possible based on an impact assessment of the benefits, practicability and administrative costs involved."*

In its report on the EU's draft general budget for the 2008 financial year<sup>8</sup>, the European Parliament *"re-emphasises its strong commitment to the proper budgetary endowment of funds for school fruit and vegetables...expresses its astonishment that the Council did not implement their political commitments...by creating a new line and a reserve in the budget, pending establishment of the legal base; calls on the Commission to put forward a legislative proposal...as laid down in the June 2007 Agriculture Council conclusions."*

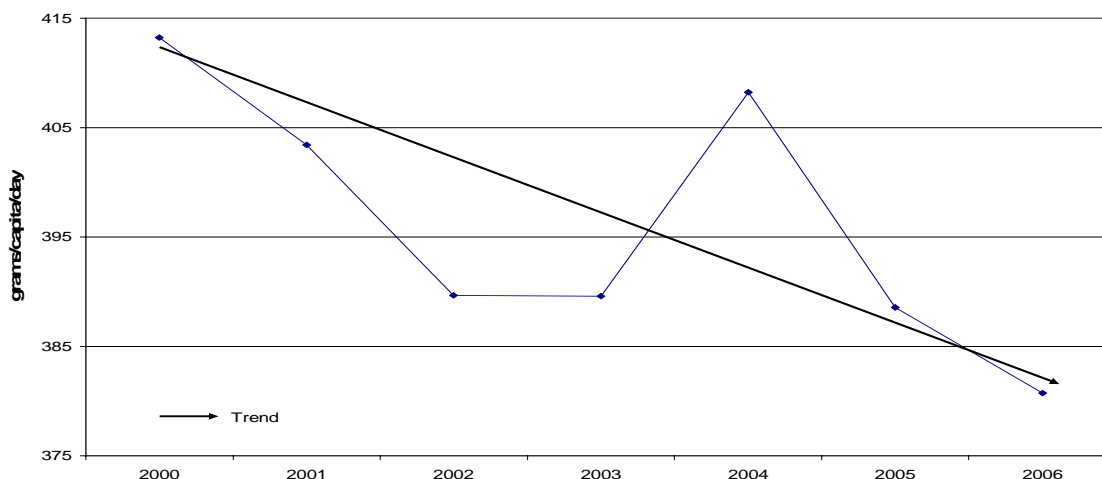
The Commission's Legislative and Work programme 2008 makes reference to a possible School Fruit Scheme (2008/AGRI/004) in Section 4 "Working to shape new policies". In accordance with the Commission's commitment to better legislation and the minutes of the College of Commissioners' meeting on 6 June 2007<sup>9</sup>, the presentation of a School Fruit Scheme proposal will be conditional on the conclusions of an assessment demonstrating its value added at EU level and analysing the advantages and drawbacks of different options.

### 3.2. Insufficient and decreasing consumption

In recent years, the overall consumption of fruit and vegetables has been falling in the European Union, even in major producing Member States. Together with growing imports, this has resulted in some economic pressure on the EU fruit and vegetable sector.

The real *per capita* consumption of fruit and vegetables is difficult to measure; many products are involved, most of which are highly perishable, and so the level of waste is high. Only estimates based on production and trade data can be made. The following estimates take into account losses occurring at wholesale level, but not losses occurring at other stages of the supply chain, including at home, due to lack of data. Therefore, the following figures illustrate the "apparent" consumption of fruit and vegetables and overestimate the real intake figures<sup>10</sup>.

**Graph 1: Evolution of apparent consumption of fruit and vegetables – EU-27**



<sup>8</sup> European Parliament report A6-9999/2007 Part 1 of 29.11.2007, p. 9.

<sup>9</sup> PV (2007) 1791 final.

<sup>10</sup> For example, a recent INRA study reports a real net daily consumption of less than 350 grams per capita in France, considerably below our estimate of 405 grams.

Despite these limitations, Graph 1 clearly shows a declining trend in the amount of fruit and vegetables made available to EU citizens. In 2006, EU-27 average apparent consumption is estimated at 380 grams net of fruit and vegetables per capita per day. If the current downward trend continues, by 2010 the average will have fallen to only 360 grams net per day.

The majority of European citizens are therefore far from meeting the World Health Organisation recommended **minimum net intake** of 400 grams of fruit and vegetables per day. However, this average figure hides different situations among the Member States, as shown in Graph 2.

Consumption varies greatly among Member States, depending mainly on traditional eating habits and culture. In general, major producing Member States record higher consumption rates, but a negative trend has recently been seen even in Mediterranean countries.

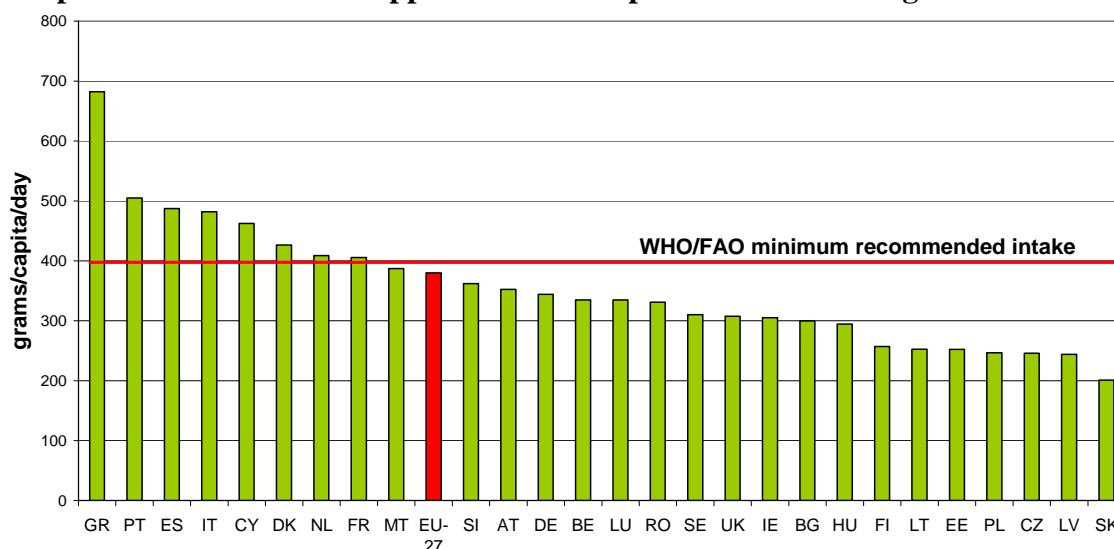
The situation is particularly worrying among children. There has been an important change in the diet of the young population, and consumption of fruit and vegetables is significantly lower than what it used to be. For instance, the Pro-Children project financed by DG Research measured fruit and vegetable intake in children in several EU Member States<sup>11</sup> and found that in average **only 17.6% of the 11-year-old children reached the recommended level of 400 g/day**. The percentage varies among the 9 countries between 7.8% and 24.1%. The mean intake was shown to be 227 g/day<sup>12</sup>. The project showed that the consumption of fruits and vegetables is low even in some of the Mediterranean countries. Among the countries covered by the study, Spanish children were shown to have the lowest consumption, together with children from Iceland.

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<sup>11</sup> DG RTD project No QLK1-2001-00547 "Promoting and Sustaining Health through increased Vegetable and Fruit Consumption among European School children" (Pro-Children) involving Austria, Belgium, Denmark, the Netherlands, Portugal, Spain and Sweden, plus Iceland and Norway.

<sup>12</sup> Yngve et al. *Fruit and vegetable intake in a sample of 11-year old children in 9 European countries: The Pro-Children Cross-Sectional Survey*. Ann. Nutr. Metab. 2005 Jul-Aug; 49 (4): 236-245

**Graph 2: Total estimated "apparent" consumption of fruit and vegetables – EU-27**



Source: DG AGRI C.2 estimates, based on WHO data and Freshfel estimates for 2006 (all age groups)

One of the factors motivating low fruit and vegetables consumption by children is their apparent lack of availability. According to the Pro-Children study, only 22% of the children reported good availability of fruits and vegetables at school and during leisure-time activities<sup>13</sup>.

This highlights the importance to ensure an appropriate availability of fruits and vegetables at school. Schools are among the most important food service providers<sup>14</sup>; influencing their food provision choices can make a direct and significant contribution to the objectives of the SFS.

They also offer the best environment for the interaction and cooperation of the various players that need to play a role in reshaping the eating habits of children at an age when their eating habits are formed, towards more healthy diets with a strong fruit and vegetable component.

### 3.3. The health issue

In 1997, the International Obesity task Force (IOTF) stated that "the prevalence of obesity is rising to epidemic proportions in Europe at an alarming rate"<sup>15</sup>.

In 2003, the World Health Organisation (WHO) concluded that "childhood obesity is already an epidemic in some European countries and on the rise in others".

In another statement, in 2004, the IOTF said that "the epidemic (in Europe) appears to be accelerating out of control. Things are worse than our gloomiest predictions. This provides a compelling case for the whole of the European Union to act together to tackle this."

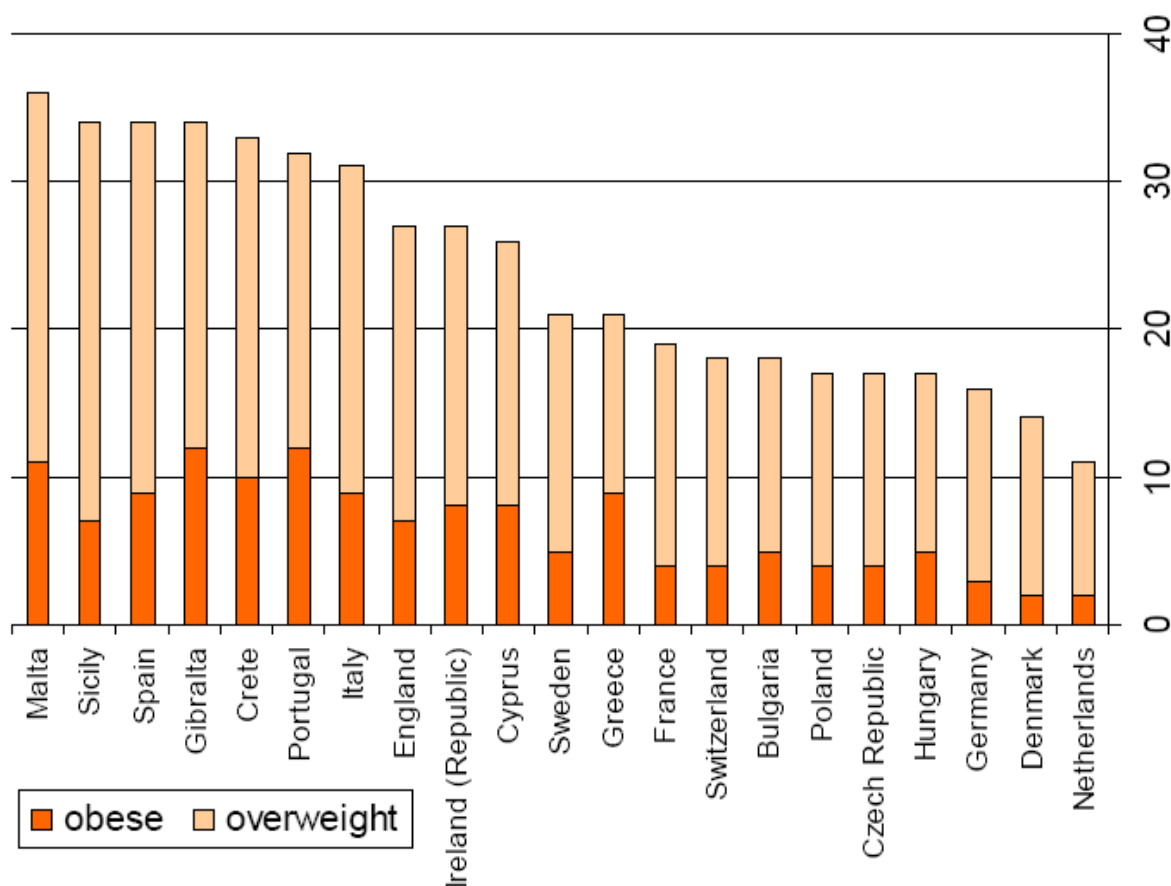
<sup>13</sup> Sandvik C. et al. *Personal, social and environmental factors regarding fruit and vegetable intake among school children in nine European countries*. Ann. Nutr. Metab. 2005 Jul-Aug; 49 (4): 255-266.

<sup>14</sup> Today, in the EU, more than 50% of all meals are prepared by food services or eaten in restaurants, canteens etc.

<sup>15</sup> International Obesity Task Force (IOTF) <http://www.iotf.org/media/euobesity3.pdf>

This steady rise in overweight and obesity can be observed in the European population and, especially, among children. It is estimated that in the EU-25 approximately 22 million children are overweight, while 5.1 million of these children are obese<sup>16</sup>.

**Graph 3: Percentage of 7 – 11 year old children that are obese or overweight**



Source: IOTF 2005

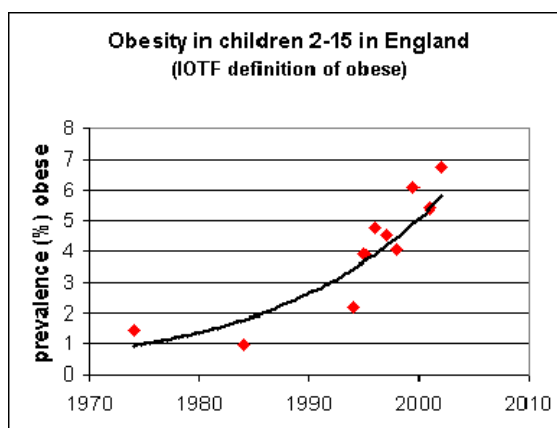
Graph 3 provides an important insight into Graph 2: high overall consumption rates do not alone guarantee lower child obesity rates (see the examples of Portugal, Italy and Spain). Consequently, even if some Member States have ‘sufficient’ average consumption levels in the whole population, this does not mean that they do not need to address high – and increasing – obesity rates among their children. Either because the consumption amongst children is insufficient or due to the more complex elements like lifestyle, lack of physical activity, diet habits apart from fruit and vegetables or a combination of these factors.

Conservative estimates suggest that the number of obese children will increase by 400 000 per year in the EU-25<sup>17</sup>. This figure could even be revised upwards, since the rate of prevalence of obesity is accelerating alarmingly – as shown in Graph 4: the example of England.

<sup>16</sup> Jackson-Leach, R. & Lobstein, T. 2006, "Estimated burden of paediatric obesity and co-morbidities in Europe. Part 1. The increase in the prevalence of child obesity in Europe is itself increasing", *Int.J.Pediatr.Obes.*, Vol. 1, No 1, pp. 26-32.

<sup>17</sup> International Obesity Task Force IOTF  
<http://www.iotf.org/popout.asp?linkto=http://www.iotf.org/media/IOTFmay28.pdf>

**Graph 4: Rise of obesity in 2 – 15 year old children in England**



Source: IOTF 2005

Obesity is strongly associated with developing type 2 diabetes. In addition, the risk of developing dyslipidaemia and hypertension is greatly and moderately increased, respectively, with obesity. Being obese in childhood and adolescence is also likely to be related with other health problems such as fatty liver and asthma, as well as psychological and social problems<sup>18</sup>.

Obesity is now responsible for up to 6% of the total health bills in EU Member States<sup>19</sup>. The International Obesity Task Force (IOTF) has estimated the cost of obesity in the EU-25 to be about €150 billion in health care costs and lost productivity.

In the Netherlands it is estimated that the **health care costs** linked to insufficient intake of fruit and vegetables is €460 million<sup>20</sup>.

In Denmark, the socio-economic costs resulting from loss of production **related to deaths** due to low fruit and vegetable intake are estimated at €53 million<sup>21</sup>.

Although no figures are available for the EU-27, on the basis of the Dutch and Danish figures it can be assumed that the costs due to insufficient consumption of fruit and vegetables are significant also for other EU Member States.

### **3.4. Social and economic aspects**

Obesity is not equally distributed in society, but tends to cluster in lower socio-economic groups (SEGs). Two specific aspects, related to **social concerns** underlined by the European Health Strategy adopted in October 2007<sup>22</sup> should be underlined:

- The link between low household income, other social factors and insufficient expenditure on fruit & vegetables has been established by several studies in the USA and Europe. An INRA study concludes that the level of consumption of fruit and vegetables is an indicator

<sup>18</sup> Lobstein T., Baur L. & Uauy, R. 2004, "Obesity in children and young people: a crisis in public health", *Obes.Rev.*, Vol. 5, Suppl. 1, pp. 4-104.

<sup>19</sup> Knai C., Suhrcke M. & Lobstein, T. 2007, "Obesity in Eastern Europe: an overview of its health and economic implications", *Econ.Hum.Biol.*, Vol. 5, No 3, pp. 392-408.

<sup>20</sup> WHO 2007, *The challenge of obesity in the WHO European Region and the strategies for response*.

<sup>21</sup> Juel, Sørensen & Brønnum-Hansen 2006. It has been estimated by the Human capital method, i.e. the time span between a person's absences from the workplace to the age of retirement due to ill-health.

<sup>22</sup> EC White Paper "Together for health: a strategic approach for the EU: 2008-2013". COM(2007) 630.

of the family's economic, educational and social situation<sup>23</sup>. This result is also supported by a study from the USA indicating a strong link between education levels and a higher intake of fruit and vegetables<sup>24</sup>.

- Figures indicate a potential health gap<sup>25</sup> between the new (EU-10) and old Member States (EU-15) and suggest that the new MS would benefit most from eating more fruit and vegetables, especially in terms of a fall in cardio-vascular disease (CVD). The health gap is further exacerbated by the difference in age at which diseases linked to a low fruit and vegetable intake occur; these diseases have an earlier onset in the EU-10 compared with the EU-15<sup>26</sup>. More details are given in Annex 10.

In order to effectively achieve the public health objectives of any SFS initiative, it is clear that the social dimension should be taken into account as part of a modern social agenda helping citizens to enjoy longer and healthier lives.

More background on the health issues is given in Annex 9.

### **3.5. Partial conclusion**

- Available data suggest that the intake of fruit and vegetables is lower among children than adults.
- Even in Member States that, overall, reach the recommended intake, consumption among children appears to be insufficient and decreasing.
- Eating habits shaped at an early age have long lasting effects.
- Scientific evidence from SFS evaluations clearly indicates that schools represent an environment well suited to influencing the eating habits of young people towards a healthy diet with a strong fruit and vegetable component.

In light of the above, it is essential to undertake actions targeted at young consumers, who in the future will become adult consumers.

## **4. SCIENTIFIC EVIDENCE ON THE EFFECTIVENESS OF SCHOOL FRUIT AND VEGETABLE SCHEMES**

A recent review of scientific evidence concludes that SFS are an effective tool to durably increase the consumption of fruit and vegetables, and so contribute to improving health and avoiding or reducing public health expenditure, as long as certain conditions are met<sup>27</sup>.

Data from 35 studies (25 of which have a reference period of more than one year) included in a review of school fruit and vegetable programs worldwide<sup>28</sup> indicate that 65% of school children across all age groups showed statistically significant increases in fruit and vegetable

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<sup>23</sup> [http://www.inra.fr/les\\_partenariats/expertise](http://www.inra.fr/les_partenariats/expertise)

<sup>24</sup> Blisard N., H. Stewart, D. Jolliffe, "Low-income household's expenditure on fruit & vegetables", ERS/USDA 2004;

<sup>25</sup> See Table 3 in Annex 9.

<sup>26</sup> Pomerleau, Lock & McKee 2006.

<sup>27</sup> See Bibliography in Annex 3.

<sup>28</sup> De Sa J, Lock K. 2007, *School-based fruit and vegetable schemes: A review of the evidence*, London School of Hygiene and Tropical Medicine 2007.



intake at follow-up, with none reporting a decreased intake. The review provides evidence that both large (national) and smaller (local) scale fruit and vegetable schemes can have a long term impact on consumption.

The analyzed studies refer to different implementing models of School Fruit Schemes (as described below in section 5.2), and different frequency of produce provision.

One study showed that free school fruit and vegetable schemes can also help reduce inequalities in diet among different socio-economic groups (SEGs) and reduce consumption of confectionery, crisps and sweetened soft drinks, especially in lower SEGs<sup>29</sup>.

Experience-based evidence originating from the currently on-going School Fruit (and Vegetables) Schemes in Denmark, Ireland and England demonstrates an increase of fruit & vegetables consumed by children between 0.4 and 1.1 portions per day during and (one to two years) after these schemes<sup>30</sup>.

Although relatively few long-term studies have examined the effect of fruit and vegetable intake early in life on the risk of Chronic Non-Communicable Diseases (CNCD), a UK study has shown that children with high fruit and vegetable intake have a significantly lower risk of suffering strokes and cancer in the future<sup>31</sup>.

Improving the eating habits of children and adolescents is therefore an important strategy for improving public health. Increased fruit and vegetable consumption can have an immediate effect on maintaining a healthy body weight and long term effects in reducing the risk of CNCD such as diabetes. Interventions targeting healthy nutrition need to occur early in childhood or during adolescence, in order to prevent or reverse the adverse health effects of overweight and poor eating habits<sup>32</sup>.

Studies further show that healthy eating habits formed in childhood extend into adulthood: high consumers of fruit and vegetables in childhood remain high consumers as adults, with some variation in adolescence. (The dip in consumption during adolescence recovers once this group themselves become parents.) Low consumers in childhood remain low consumers as adults with negative consequences for their own children<sup>33</sup>.

Schools seem to be the ideal context to target increased fruit and vegetable intake in children and adolescents. Although school systems, food cultures and school food environments vary from country to country, schools in the EU as health promotion arenas have certain common features. Ideally, schools can provide a platform for combining theory and practice, i.e. learning about healthy food in the classroom and eating, tasting and experiencing healthy food provided at school<sup>34</sup>.

Schools can reach almost all children and adolescents regardless of their social background, during their first decades of life<sup>35</sup> and are a critical part of the social environment that shape young people's behaviour<sup>36</sup>. Most children start in educational establishments at the age of

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<sup>29</sup> Bere et al. 2005; Bere, Veierod, & Klepp 2005

<sup>30</sup> See Lowe CF et al. 2007; Blenkinsop, S. et al. 2007; Pederson, R. & Nowak, I. 2008.

<sup>31</sup> Maynard et al. 2003; Ness et al. 2005

<sup>32</sup> St Onge, Keller, & Heymsfield 2003

<sup>33</sup> Kelder, Perry, Klepp, & Lytle 1994; Lien, Lytle, & Klepp 2001

<sup>34</sup> Dixey et al. 2006

<sup>35</sup> Glanz et al. 1995

<sup>36</sup> Parcel et al. 1989

6 years, a key period for forming habits, thus 27 out of 37 reviewed schemes target children during their first school years (i.e. age group of 6 – 10 years old)<sup>37</sup>.

Finally, experts have indicated that, for schemes to be truly effective, it is important that produce is distributed free of charge<sup>38</sup>.

## **5. HOW WOULD THE PROBLEM EVOLVE IF THE CURRENT EU APPROACH WERE TO CONTINUE?**

Several initiatives and activities that focus on increasing fruit and vegetable consumption also among school children are already underway both at EU level and in the Member States and regions.

### **5.1. EU Initiatives**

#### *5.1.1. DG AGRI*

DG AGRI has already given high priority to increasing the consumption of fruit and vegetables through its communication strategy. As described in Section 2.2 a number of agricultural events in which DG AGRI has participated have reflected the importance of this issue.

Council Regulation (EC) No 3/2008 of 17 December 2007<sup>39</sup> on information and promotion measures for agricultural products on the internal market and third countries provides for a Community financial participation in the programmes selected of up to 50% of their actual cost. The recent fruit and vegetable reform increased the budget for promoting these products by €6 million.

At present, DG AGRI is supporting 27 programmes that include at least an element of promotion of fruit and vegetables in schools, with an annual budget contribution of around €2 million. In the context of the reform it was agreed<sup>40</sup> that special focus should be given to promotion targeted at children in educational establishments, for which the Community's financial contribution should be increased from 50% to 60%.

In addition, produce withdrawn from the market by Producer Organisations can be distributed free to recipients approved by Member States, including schools and children's holiday camps. The new regime (as from 1 January 2008) sets out to support the free distribution of withdrawn product even more than previously, as an alternative to destruction.

#### *5.1.2. DG SANCO*

The EU Platform for Action on Diet, Physical Activity and Health was launched in March 2005 with the purpose of creating a European forum to engage in concrete actions designed to contain or reverse current trends. To date the Platform has 34 EU member organisations, ranging from food industry to consumer protection NGOs. Members cover a wide range of

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<sup>37</sup> De Sa J, Lock K. 2007.

<sup>38</sup> Bere, E., Veierod, M. B., & Klepp, K. I. 2005, "The Norwegian School Fruit Programme: evaluating paid vs. no-cost subscriptions", *Prev.Med.*, Vol. 41, No 2, pp. 463-470.

<sup>39</sup> OJ L 3, 5.1.2008, p. 1.

<sup>40</sup> Article 49 of Council Regulation (EC) No 1182/2007.

activities, including actions aimed at increasing the intake of fruit and vegetables by EU citizens<sup>41</sup>.

A High Level Group was established following the adoption in 2007 of the Commission's White Paper "A Strategy for Europe on Nutrition, Overweight and Obesity related health issues". The Group's aim is to develop actions in Member States and across the EU in the field of nutrition and physical activity.

The European Commission's main instrument for implementing the EU Health strategy is the 'Public Health Programme'. Through the projects it funds, the programme aims to improve the level of physical and mental health and wellbeing of EU citizens and reduce health inequalities throughout the Community.

### 5.1.3. DG RTD (Research)

Since 1998 DG RTD has committed more than €260 million to funding obesity-related research and projects on the beneficial effects of fruit and vegetables. Scientific evidence from these projects has shown the beneficial effects on human health of eating fruit and vegetables<sup>42</sup>.

Results have also shown that lifestyle, availability (i.e. fruit is not usually readily available in schools, work and leisure places), the few "convenience" forms of fruit and vegetables, relatively high prices, the media and lack of information/education and consumer awareness on the benefits of fruit and vegetables, all influence consumer attitudes and behaviour in their choice of food<sup>43</sup>.

The Pro-Children project showed that increasing the availability of fruit and vegetables at school and during leisure time leads to increased consumption, achieving a 23% increase for fruit and an 18% increase for vegetables. This suggests that the wide availability of fruit and vegetables in a "convenience" form is an important factor for consumption.

## 5.2. Member State initiatives

In the EU Member States a variety of very different programmes exist, aimed solely or partly at increasing the consumption of fruit and vegetables by children in school settings.

Fact sheets have been collected on 21 schemes currently running or recently finished in eleven Member States; the map below shows their location in the European Union. An analysis of these highly diversified schemes allows three general implementation models to be identified:

- **Enticement programme** (e.g. Food Dudes in Ireland): for a brief period (17 days) children join a comprehensive school programme on healthy diets that also includes the distribution of free fruit & vegetables. As a follow-up, they are encouraged to bring fruit & vegetables to school for lunch. Given the short time and small quantities of fruit & vegetables provided, costs per portion<sup>44</sup> are comparatively high but the short duration of the scheme also means that overall costs are low. In addition, a major budget allocation for accompanying measures is necessary.

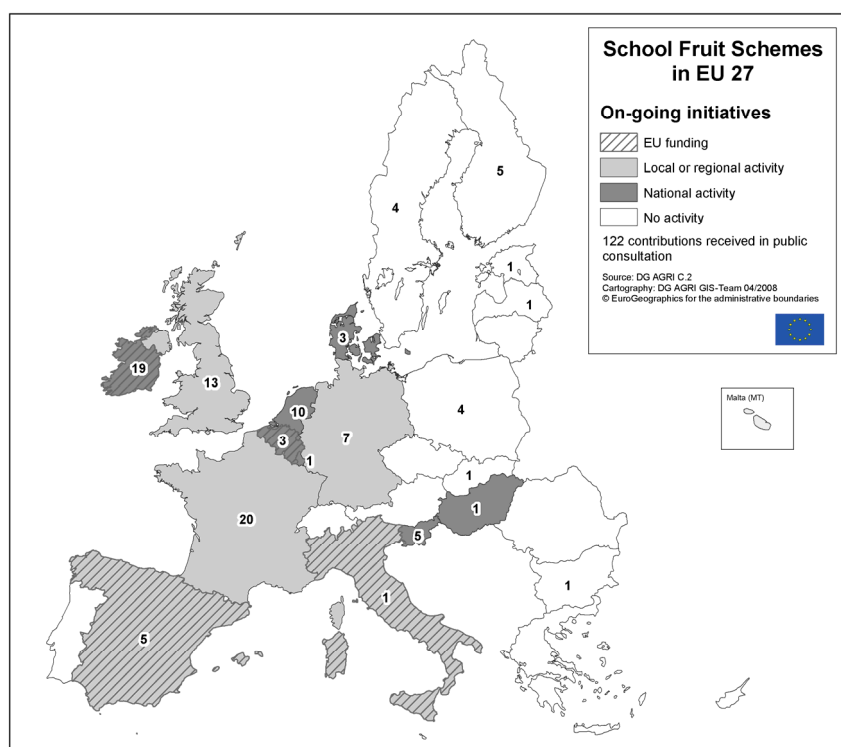
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<sup>41</sup> [http://ec.europa.eu/health/ph\\_determinants/life\\_style/nutrition/platform/database/web/dsp\\_search.jsp](http://ec.europa.eu/health/ph_determinants/life_style/nutrition/platform/database/web/dsp_search.jsp)

<sup>42</sup> See Annex 9.

<sup>43</sup> See Annex 6.

<sup>44</sup> A portion is generally defined as 120 grams of fruit or vegetables, e.g. a small apple.



- **Kick-start programme** (e.g. Fruit Break, Denmark; School Fruit Week, Germany): over a period of four to eight weeks, children receive fruit & vegetables at least once a week as part of a comprehensive education programme, including farm visits and also targeting parents. As the programme can be timed to coincide with a season when local production provides for cheap produce, costs per portion are lower than for the enticement schemes but overall costs are higher.
- **Provision programmes** (e.g. School Fruit & Vegetables Scheme in England: children are provided with free fruit & vegetables to be consumed during school breaks over a full school year. Diet-related information is made available only initially, but no accompanying measures are included. Costs are low per portion due to economies of scale but high overall (180 to 200 school days).

All three approaches have been **externally evaluated**<sup>45</sup>, and demonstrate an increased consumption of between 0.4 and 1.1 portions per day per child. In the case of the Irish “Food Dudes” programme, the evaluation clearly demonstrated a lasting effect twelve months after the programme had stopped and, also, a marked increase in consumption by parents.

The evaluations have also brought to light a common set of **limitations** that apply to these schemes, including notably:

- most schemes are small-scale and local with a limited target group (only the English programme covers all schools in a target age group),
- most schemes are short-term, with no assured continuity (annual budget appropriations),
- not all schemes include accompanying measures.

<sup>45</sup> School Fruit Schemes in Ireland, Denmark and England.

More details of the programmes are provided in Annex 11 and a description of the three distinct models they follow is in Annex 14.

### **5.3. Partial conclusion**

If no action is taken in the form of an EU SFS, actions similar to those described above may continue or start in some or many Member States. The effect they have on fruit and vegetable consumption by children will depend on the financial resources made available. If the action is limited, as has hitherto been the case in most Member States, the positive effect on consumption will be limited or negligible. Only those Member States that can afford the necessary budgetary resources will be able to have a tangible effect on consumption, with the related positive health effects. In Member States with no schemes, stable or declining consumption is likely to occur. This would result in a fall in EU consumption and a decline in the market for EU producers.

The continued unbalanced development of SFS among Member States would have consequent negative impacts on social cohesion and equal opportunities among EU citizens. Evidence reported in the scientific literature shows that, in order to be effective, SFS must be properly implemented – see Box inset.

## LESSONS LEARNED

### Conditions for successful implementation of a School Fruit Scheme

- The SFS should be flexible, recognising differences in culture, school food environments and administrative arrangements.
- It should ensure a variety of safe, ready to eat, high quality, culturally acceptable fruit and vegetables and avoid simplistic notions as to what product is "best".
- To ensure equality of access to the scheme, no charge should be made for fruit & vegetables in schools.
- The minimum target of 400 g/day should include 150 g of fruit and 250 g of vegetables; fresh, frozen, chilled, canned and dried produce; no more than 100 ml of pure fruit juice based on clear guidelines regarding eligible products.
- Convenience/processed foods should be eaten in moderation (as they may also contain high fat, sugar, salt).
- The SFS should encourage a broad partnership between education, health and agriculture and involve private, public and civil sectors.
- This partnership would, in particular, be important for the choice of produce, which should be based on nutritional value and pedagogical considerations. The taking into account of environmental and social concerns – based on objective, non-discriminatory criteria - would be a plus.
- Schools participating would present a nutritional strategy explaining how the fruit & vegetable scheme would be integrated into the school's curriculum.
- Fruit and vegetables have to be made available in schools, one way or another.
- Rules and eligibility should be kept simple to encourage participation by Member States, the EU fruit and vegetable sector, government agencies, schools and other relevant stakeholders.
- Accompanying measures that reinforce the efficiency of the scheme and its sustainability should be compulsory (e.g. educational material, promotion kits). Produce alone is not sufficient.
- Projects should be set up on a long-term basis, as their benefits will become visible in the long-term.
- The removal of competing foods, in particular in vending machines, in the school environment i.e. savoury and sugary snacks and sweetened drinks is recommended. In turn a replacement with vending machines with fruit and vegetables could be recommended.

*To be taken into account in the Council Regulation and Commission implementing provisions*

## **6. IS COMMUNITY INTERVENTION JUSTIFIED?**

### **6.1. Treaty basis**

An SFS at EU level should contribute to stabilising and enhancing the market for fruit and vegetables in accordance with the objectives of the CAP as spelled out in Article 33 of the Treaty.

In accordance with Article 37 of the Treaty, the Commission is in charge of submitting proposals for working out and implementing the CAP. In this context, the Court of Justice has consistently held that Article 37 of the Treaty leaves a wide discretion to the institutions in implementing the objectives of the Common Agriculture Policy<sup>46</sup>. This is especially so where a scheme would form part of the much bigger market organisation for fruit and vegetables.

As an example, the School Milk Scheme is based on Article 37 of the Treaty, as specified in Article 14 of the milk common market organisation<sup>47</sup>. The justification, in recital 10 of the Regulation, states: *"Whereas in order to stimulate the consumption of milk by young people, provision should be made for the Community to defray a part of the expenditure occasioned by granting aid for the supply of milk to pupils in schools"*.

According to Article 152 of the EC Treaty, a high level of human health protection shall be ensured in the definition and implementation of all Community policies and activities, which includes the CAP.

The Common Agriculture Policy (CAP) plays an important role in food production and supply. As such, it can play a role in shaping the diet of EU citizens and help fulfil the goals specified in Article 152. However, the limited legal base for action in Article 152 would preclude the introduction of a School Fruit Scheme under that provision.

Article 37 of the Treaty is therefore an appropriate and sufficient legal base for a School Fruit Scheme.

### **6.2. Subsidiarity**

For Community action in this field to be justified, both aspects of the subsidiarity principle should be met, namely that the proposed action cannot be sufficiently achieved by individual Member States and can therefore be only or better achieved by Community action. As became apparent during the process of consultation and collecting expertise, the following arguments call for a concerted action at EU level:

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<sup>46</sup> See e.g. case C-11/90 Hierl, European Court reports 1992, p. I-02061.

<sup>47</sup> Council Regulation (EC) No 1255/1999 of 17 May 1999 on the common organisation of the market in milk and milk products (OJ L 160/48 26.6.1999), now incorporated in Council Regulation (EC) No 1234/2007 of 22 October 2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation).

- **Consumption** of fruit and vegetables below the WHO minimum recommended level of 400 g/day is a common phenomenon in the European Union, affecting most MS;
- **Obesity** is a Europe-wide phenomenon with children between the ages of 7 and 11 being, for example, 27% overweight and 8% obese in Ireland, 31% overweight and 9% obese in Italy and 18% overweight and 5% obese in Bulgaria<sup>48</sup>.

These problems could be dealt with to some extent at national level but a number of **trans-national elements** imply that action at EU level would be appropriate and desirable:

- a significant **EU budget allocation** would allow the extension of existing SFS in several Member States, while encouraging those that are not yet active, often due to limited budgetary means, to start schemes;
- a lack of EU action and the continuation of activities exclusively at Member States level would create the risk of **discrimination** between producers in those countries that do have no access to an SFS as a market outlet and the resulting incentive for innovative products. This could have an effect on their competitive position;
- an **exchange of experience and transfer of know-how** between project promoters in Member States foster the development of best-practice models and supports the creation of schemes in Member States that are not yet active;
- **health costs** of obesity related diseases, especially diabetes and cardio-vascular diseases (CDV). This is not only an individual Member State responsibility, as cross-border healthcare has been reinforced by European Court of Justice case law.

A concerted SFS action at EU level would not be a panacea for the problems described. It should provide an element in the fight against obesity, fostering healthy eating habits among children and educating the consumers of tomorrow. In this context EU action would **produce clear benefits** compared with action at Member States level.

In case a SFS at EU level is established with a significant EU financial contribution, accompanying measures become an obligation. A common EU framework would integrate the conditions for success as spelled out in the box contained in Section 5.3. In order to respect the subsidiarity principle, the following conditions would need to be met:

- participation in the Scheme should be **optional**;
- Member State competence in **education and public health** should be fully respected (by defining the core target group by age only and allowing Member States to adapt the scheme to their school system; by requiring the competent health authorities to define the eligible list of products etc.);
- the EU framework should be wide enough to support and extend existing **Member State initiatives**, while safeguarding the principle of additionality.

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<sup>48</sup> IOTF/IASO, *Obesity in children and young people: a crisis in public health*, 2004.



## 7. OBJECTIVES OF AN EU SCHOOL FRUIT AND VEGETABLE SCHEME

### 7.1. Overall objective

The **overall objective** of a European SFS would be to provide a policy and funding framework for Member State initiatives aimed at durably increasing the share of fruit and vegetables in the diets of children, at the stage when their eating habits are formed<sup>49</sup>. This would represent an investment in the future, by helping to avoid or reduce health expenditure resulting from poor diet. Furthermore, the positive impact on consumption would contribute to meeting CAP objectives.

The economic, health and social aspects of the overall objective are complementary and mutually supportive.

### 7.2. Specific objectives

The **specific objectives** would address the problems described in Section 3 (Problem Definition):

- reach a significant number of children, to allow them to participate in actions promoting sustainable consumption of fruits and vegetables in schools,
- contribute to arresting declining consumption and, eventually, reversing the long term trend in consumption,
- fostering healthy eating habits among school children which should continue after they have left school, with consequent lasting health benefits,
- promote best practices on designing SFS among Member States, in order to enhance effectiveness,
- contribute to reconnecting urban citizens with food and its producers, so enhancing perceptions about agriculture, the CAP and the EU,
- allow fruit and vegetables to be eaten by children while in school, providing equal opportunities for children in the EU and so contribute to EU social cohesion,
- demonstrate that the EU addresses real concerns of the citizens.

### 7.3. Core criteria

The core **criteria** used to assess the options are the following:

- direct and sustainable increase in consumption,
- budget costs and cost effectiveness; limitation of administrative costs,
- increase in the awareness of the role of fruit and vegetables in a healthy diet,
- increase the percentage of socially disadvantaged pupils to benefit from an SFS.

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<sup>49</sup> This can be seen as contribution to achieve the WHO recommended minimum daily intake of 400 grams of fruit and vegetables per day, taking into account that particularly children have a lower intake, even in Member States with an overall high fruit and vegetables consumption.

## 8. POLICY OPTIONS

The Commission has long recognised that schools are an appropriate setting to durably influence the behaviour of children. Examples of such programmes are the DG AGRI School Milk programme, the "Common Values" programme initiated by DG Justice<sup>50</sup>, Freedom and Security, and various actions undertaken in schools by DG Environment.

A non-exhaustive list of EU actions is provided in Annex 12.

Based on the considerations described in the preceding sections, the ISG identified four options to be explored during the impact assessment process. They are not mutually exclusive; some of their elements could be combined to form a new option.

The ISG quickly agreed on the problem definition (Section 3) and on the usefulness of public intervention in promoting the consumption of fruit and vegetables among school children. The ISG identified two core issues on which to concentrate: the conditions of effectiveness of SFS schemes and the role of the European Union.

The four options are listed in order of increasing EU financial involvement. While all four are intended to address the same problems, they will not do so to the same degree. Their impact on the consumption of fruit and vegetables and consequent health benefits is expected to be in proportion to the scale of implementation and the long-term continuity of the programme.

### 8.1. Status Quo (Option 1)

Under this option, there would be no new initiative at European level. The ongoing EU Member State activities described in Section 5 are judged sufficient.

### 8.2. Networking (Option 2)

In a number of Member States, a variety of stakeholders are promoting all kinds of projects that include providing fruit and vegetables to school children.

Under this option, Community intervention would be limited to a range of communication activities. The Commission action could be to foster exchange of experience and know-how transfer among project promoters in Europe.

Activities would fall into three broad categories:

- **Informing the public:** maintaining a webpage (including interactive tools, video messaging, blogs ...), publication of brochures on the CAP and public health nutrition and healthy eating habits (case studies, best practice models). Both activities would be a continuation of existing communication activities, requiring limited funding (e.g. brochures in all languages, colour print).
- **Providing tools for action:** creation of an internet page functioning as a portal for SFS projects and initiatives within the EU (direct link to project web pages), database of experts and publications (academic, NGOs, Government). This activity would have to be contracted out.

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<sup>50</sup> <http://www.valeurscommunes.org/home.php?lingua=en>

- **Demonstrating success:** a large-scale annual conference (including workshops) bringing together project promoters from all Member States and sectors to exchange experience and establish contacts; could include a 'European Healthy School Award'.

### 8.3. Supporting initiatives (Option 3)

Under this bottom-up approach the EU would support initiatives for the promotion of fruit and vegetable consumption in schools. EU funding of product purchases would, however, be excluded. This is the key difference between Options 3 and 4.

Implementation would be modelled roughly on current promotion programmes, with management shared between the Commission and Member States:

- Member States make calls for proposals on a regular basis, as is now the case for the promotion programmes supported by Regulation (EC) No 3/2008;
- funds are allocated by the EU according to the number of school children in the agreed target group. Co-funding of programmes by Member States and proposing organisations is compulsory;
- the list of programmes selected by the Member States is checked for compliance by the EU and approved before funding is committed.

The initiatives supported include accompanying measures aimed at changing the eating habits of school children, such as training and awareness-raising initiatives, the production of specific promotional material and site visits.

The EU's financial contribution could be 60%, as decided already in the context of the fruit and vegetable reform. Co-financing of programmes would be compulsory and proposing organisations would also have to fund part (e.g. 20%) of the real costs of the programme.

The recent fruit and vegetable reform increased the indicative budget for the promotion of these products by €6 million. This amount could be reserved for launching an EU SFS initiative. In the following years, and depending on the scale and relevance of the programmes presented to the Commission, consideration could be given to increasing the budget. This discussion would take place in the general context of the annual budget debate and decisions.

A variant of option 3 could be envisaged by simply increasing the available budget with immediate effect by a more significant amount.

The legislative, administrative and budgetary framework is already in place. It would be straightforward to implement at EU level and could build on experience already acquired with DG AGRI's promotion programmes.

To add to its positive impact, and ensure an even wider sharing of experience, this option could be combined with Option 2.

#### **8.4. Driving initiatives (Option 4)**

This option would establish a single, flexible EU framework for a School Fruit Scheme which would add real value to Member State initiatives, while respecting the principle of subsidiarity. Member States would choose whether or not to participate in the framework programme; participation would not be obligatory. An evaluation could be foreseen after 3 years based on the experience gained in order to establish whether changes are necessary

The allocation mechanism of the available EU budget is based on the number of school children in the target group within each Member State. As set out in section 4, the best suited target group for an effective School Fruit Scheme are children aged 6-10, as explained in section 4.

The budgetary allocation is calculated based on the number of children in each Member State of this core target group. Funds allocated to Member states not wishing to participate in the scheme are allocated to those willing to join. However, in order to simplify the financial management of the scheme, no redistribution between Member States during the financial year would be provided for.

|              | <b>Children 6–10</b> |                       |
|--------------|----------------------|-----------------------|
|              | <b>Number</b>        | <b>Proportion (%)</b> |
| <b>BE</b>    | 592 389              | 2.3%                  |
| <b>BG</b>    | 325 888              | 1.3%                  |
| <b>CZ</b>    | 472 173              | 1.8%                  |
| <b>DK</b>    | 349 003              | 1.3%                  |
| <b>DE</b>    | 3 984 916            | 15.3%                 |
| <b>EE</b>    | 62 570               | 0.2%                  |
| <b>EL</b>    | 528 237              | 2.0%                  |
| <b>ES</b>    | 1 975 382            | 7.6%                  |
| <b>FR</b>    | 3 786 177            | 14.6%                 |
| <b>IE</b>    | 274 944              | 1.1%                  |
| <b>IT</b>    | 2 688 328            | 10.3%                 |
| <b>CY</b>    | 49 723               | 0.2%                  |
| <b>LV</b>    | 99 689               | 0.4%                  |
| <b>LT</b>    | 191 033              | 0.7%                  |
| <b>LU</b>    | 29 277               | 0.1%                  |
| <b>HU</b>    | 522 411              | 2.0%                  |
| <b>MT</b>    | 24 355               | 0.1%                  |
| <b>NL</b>    | 984 634              | 3.8%                  |
| <b>AT</b>    | 449 686              | 1.7%                  |
| <b>PL</b>    | 2 128 868            | 8.2%                  |
| <b>PT</b>    | 531 201              | 2.0%                  |
| <b>RO</b>    | 1 116 292            | 4.3%                  |
| <b>SL</b>    | 94 854               | 0.4%                  |
| <b>SK</b>    | 301 136              | 1.2%                  |
| <b>FI</b>    | 307 122              | 1.2%                  |
| <b>SE</b>    | 503 381              | 1.9%                  |
| <b>UK</b>    | 3 635 300            | 14.0%                 |
| <b>EU-27</b> | <b>26 008 969</b>    | <b>100.00%</b>        |

As a starting point, total budget needs have been calculated of €156 Mio<sup>51</sup>. The annual financial EU budget ceiling would be set at €90 Mio, possibly with a multiannual framework to permit better planning. However, only experience will show if this amount is appropriate.

Within this overall budget, Member States would be free in their choice how to use the EU funds most efficiently in the form of a School Fruit Scheme making fruit and vegetables free of charge available to school children, be it in a long or short period of time, with a higher or lower frequency of distribution. Also, Member states are invited to extend the core target group to include other age groups, through additional national and/or private funding.

Participating Member States would then draw up their National School Fruit Strategy; they would be free to define a single national scheme or a series of regional or local initiatives.

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<sup>51</sup> The detailed calculation can be found in chapter 9.2.1 Budgetary impact – EU budget.

The National Strategy would be a joint effort of the education, public health and agriculture sector. It would comprise at least five compulsory elements:

- list of eligible produce;
- provisions for the free distribution of fruit and vegetables in schools;
- catalogue of accompanying measures;
- communication activities for ensuring visibility of EU funding;
- monitoring and evaluation mechanisms.

In addition, it would take other issues into consideration, such as the environmental and social impact of an SFS.

Available scientific literature concludes that, in order to be effective, a School Fruit Scheme should not only (some even say not mainly) concentrate on the provision of fruit and vegetables at school but also include a set of accompanying measures such as promotion campaigns (produce-linked activities), awareness raising (health and education-based activities), publicity (linked to EU funding and to public health) and activities integrating agriculture (visits to farms), education (training of teachers) and public health (involvement of parents).

In general, the accompanying measures would be financed by Member States, including health and education as well as regional and local authorities. The contribution of private partners should be allowed.

Where appropriate, accompanying measures could be eligible for support (60% EU, 20% Member States and 20% sector funded) under the EU programme for the promotion of agricultural products (Regulation (EC) No 3/2008). The additional budget for promoting fruit and vegetables earmarked in the reform of the CMO could be used for this purpose.

The purchase of fruit and vegetables (including logistics and distribution) would be 50% co-financed by the European Union, except in the convergence regions, where the co-financing rate would be 75%. In order to lessen the administrative burden, logistical and distribution costs could be paid as a lump sum based on a fixed percentage of the value of the products purchased. Additional resources for produce purchases could be provided by Member State or private funding.

This approach would ensure the active involvement of national authorities and significantly increase the available budget. It would also encourage the development and continuation of existing or planned initiatives, which in some cases (e.g. Irish Food Dudes programme<sup>52</sup>) have replaced EU funding by national funds, due to the incompatibility of the EU funding rules with the requirements of a successful SFS.

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<sup>52</sup> As available EU funding did not allow for the purchasing of produce, this source of funding was discontinued and the funding is since then provide solely by the Irish Government (national aid, approved by the Commission).

In principle, all kinds of fruit and vegetables (fresh and processed, regardless of country of origin) would be eligible for funding. However, the Commission would establish a list of negative criteria based on health concerns, for example high added-sugar content.

The clear division of funding and measures would reduce administrative costs, avoid double-funding, limit control costs and fully preserve national competence for health and education.

This option addresses all the specific objectives directly. The integrated communication activities and the accompanying measures aimed at awareness rising will demonstrate that the EU addresses the real concerns of citizens.

To add to its positive impact, and ensure an even wider sharing of experience, this option could be combined with Options 2 and 3.

## 9. ANALYSING THE OPTIONS

The objectives identified for an EU SFS should be seen as the **intended impacts** against which each option should be assessed. The impact assessment also looks at possible **unintended impacts**. In order to compare the merits of the options the following criteria are also considered relevant:

- the cost-benefit of the scheme, which should justify European action in this field while respecting the principle of subsidiarity;
- the principle of proportionality;
- the possibility to adapt the actions supported to the specific needs and capacities of various local, regional and national contexts.

In addition, the possible beneficial effects on the environment of each of the options should be taken into consideration.

### 9.1. Economic impacts

The increased demand arising from an EU SFS would have several beneficial impacts on the fruit and vegetable market. The greater the increase in demand, the bigger the impact will be.

**Option 1** would have no measurable impact on demand. **Option 2** would have a limited effect. **Option 3** is likely to have a stronger effect, but **Option 4** is expected to have by far the strongest positive impact.

**Option 2 and 3** could provide a limited incentive for product innovation.

By providing fruit and vegetables free of charge to school children, **Option 4** would give producers the impetus both to develop new products and to adapt their existing products to the requirements of the new market. Innovations would be more quickly adopted by the sector and the additional volumes traded would increase the industry's efficiency.

### 9.1.1. Internal market

- **Consumption**

The **direct impact** on consumption of any of the options will be linked to the buying and supplying of products. In this respect, **Option 1** would have no impact and **Option 2** would have a limited impact on consumption. The impact of **Option 3** would also be rather limited, if these activities are not directly linked to the free distribution of fruit and vegetables as was the case with the successful Irish "Food Dudes" scheme. **Option 4** could result in a short-term annual increase of 97 500 tonnes of fruit and vegetables, based on a portion of 120 grams per child per week for 30 weeks.

It is difficult to assess the **long-term impact** of the options, which is why monitoring and evaluation is so important and should be given EU support, as an integral part of each scheme. Scientific literature concludes that an option 4-type SFS can be an efficient tool to sustainably increase the consumption of fruit and vegetables (see Section on Scientific Evidence).

For illustrative purpose, if the scheme results in an average increase of 0.7 portions<sup>53</sup> in the daily intake of the children this would result in approximately. 800 000 tonnes of additional fruit and vegetables consumed per year<sup>54</sup>. This figure is likely to increase over the years since every year new children will participate in the scheme, increasing the overall number of children made more aware of the importance of fruit and vegetables consumption.

Moreover, the experience of the 'Food Dudes' scheme shows that an SFS impacts has an impact not only the diet of the children, but also on the parents' and teachers' eating habits. Therefore, it has an important "multiplier effect" by way of increased daily fruit and vegetables intake by children, parents and teachers alike.

It is important that the produce provided to children is tasty and ready-to-eat. This implies a major change of approach by the food chain which, up to now, has concentrated, on developing characteristics that facilitate trade and prolong shelf life. A change of emphasis would make fruit and vegetables more attractive to consumers and boost demand, resulting in a long time increase in consumption and consequently, fostering innovation in the sector.

- **Fruit and vegetable prices**

The impact on fruit and vegetable prices will be the consequence of the observed change in demand and will depend on the capacity of EU producers (and importers) to adapt themselves to the new situation if an SFS succeeds in reversing the falling trend in demand for fruit and vegetables.

At present, the total value of fruit and vegetable sales in EU-27 is estimated at €46 billion per year, to be compared with the budget of €156 million foreseen for a possible option 4 SFS – i.e. €90 million from the EU budget and €66 million from national budgets.

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<sup>53</sup> Experience-based evidence originates from the SFS in Denmark, Ireland and England and provides for an increase in portions consumed by children during and after (one to two years) the SFS between 0.4 and 1.1 portions per day per child, see Annex 3: Case studies and evaluations.

<sup>54</sup> The annual EU production of fruit is approx. 40 million tonnes, and 66 million tonnes of vegetables.



### 9.1.2. *Innovation and research*

An EU SFS might foster innovation and research for the creation of specific products that would suit the scheme, i.e. focused on children and schools. Examples include vending machines distributing fruit and vegetables as well as innovative and children attractive products (tomatoes, carrots and apples in small, child-friendly sizes) and packaging methods (apples or pineapple slices in individual packs).

## 9.2. **Budgetary impact**

### 9.2.1. *EU budget*

**Option 1:** would have no effect on the EU budget.

**Option 2** Based on the experience of the current Organic Farming campaign, an annual budget of €1 million per year in the first three years of implementation is considered necessary. An additional amount, estimated at €300 000, would be required for funding a large-scale annual conference. More detailed description of the activities covered under this budget in Annex 13.

**Option 3:** The recent fruit and vegetable CMO reform increased the indicative budget for the promotion of these products by €6 million up to a total of €12 million. This increase in the budget could be reserved for launching an EU SFS initiative. Depending on the scale and relevance of the programmes presented to the Commission, consideration could be given to increasing the budget further in the future. Any increase in the budget allocation from EU side would have to be matched by the necessary co-financing means from the side of the Member states as well as the project promoters from within the sector.

The variant of Option 3 implies an immediate significant increase of the available EU budget.

As the budget is demand driven, there is no way to evaluate what future budget needs might be. Any further needs, beyond the €6 million made available by the reform, would be evaluated on a year by year basis in the context of the global budget procedure.

**Option 4** would require a significant budget to be effective. Member States would manage their national allocation within the EU framework in the way that best suits their needs and educational structures. The **core group** to be targeted is the children in the 6-10 age group. In the EU-27, this group comprises currently 26 million children.

The experience shows that different models of SFS are effective, on condition that children are involved in a sufficient number of tasting sessions and educational activities. It also shows that logistical costs are significantly lower for programmes providing fruit & vegetables throughout the school year on a regular basis. Moreover, economies of scale increase with larger numbers of children involved and also, if multi-annual contracts are used. For example, the cost per portion is lowest in the English programme (multi-annual framework, one portion per day to every child all school year-round, €0.12 per portion) and highest in the Irish programme (annual contracts, two portions a day for two weeks, €0.63 per portion) demanding special logistic circuits.

In order to ensure effectiveness, produce would be delivered free of charge. Based on a cost per portion of €0.20, the purchasing and distribution (including logistical costs) of 30 portions of fruit and vegetables during the school year to the core group of 26 million children would require an EU budget of €90 million every year. The EU co-financing rate of 50% and 75% in convergence regions is taken account of in this calculation<sup>55</sup>.

Within the overall budget Member States would be free to decide whether to spend this allocation over the whole year, or over a shorter period based on the consultation process with their stakeholders. Experience shows, that the shorter the period is the higher the costs are and consequently, the lower the amount of fruit and vegetables that can be provided to children.

Secondly, the compulsory accompanying measures would be financed by Member States with a possible private co-funding. Some of these measures could be eligible for support under the EU programme for the promotion of agricultural products (Regulation (EC) No 3/2008) with 60% EU, 20% Member State and 20% sector funding key.

To put these figures in perspective, the 2008 situation for other AGRI policies is as follows.

| Scheme                | Number of participating Member States | Number of beneficiaries (in millions) | EU budget (in €Mio ) |
|-----------------------|---------------------------------------|---------------------------------------|----------------------|
| Most deprived persons | 19                                    | 13.4                                  | 305.1                |
| School Milk           | 26                                    | 16.5*                                 | 50.7                 |
| <i>School Fruit</i>   | 27                                    | 26                                    | 90                   |

\* estimate only

Given the current margin expected between the EAGF ceiling and the 2009 EU budget of about €2 billion, there would be no impact on financial discipline of any additional expenditure in 2009. However, taking into account the Health Check proposal and increased modulation, additional expenditure of € 90 million could mean the application of higher financial discipline in 2013 and, in the worst case scenario, also more in 2011 and 2012.

A calculation on the cost-effectiveness of fruit and vegetables intake commences at the risk reduction for CVD and diabetes due to the consumption of fruit or vegetables. Scientific evidence suggests that an increase of one portion of fruit & vegetables per day translates into a lower risk for Cardio Vascular Disease (CVD) and diabetes or other malnutrition-related disease by **30%**.

The resulting health care savings over time as the result of this reduced risk would have to be compared with the initial "investment" i.e. the cost of providing the fruit and vegetables free of charge. Taking into account the multiplier effect the savings could be substantial.

More research is needed to be able to determine more clearly the cost-effectiveness of an increase in fruit and vegetables intake as result of an SFS and the health costs saved. Systematic monitoring and evaluation tools integrated in all SFS initiatives will contribute to providing the necessary data and assessment of the SFS.

<sup>55</sup> According to Eurostat data, 31% of EU-27 population live in convergence regions. Therefore the average co-financing rate is  $(75 \cdot 0.31 + 50 \cdot 0.69) = 57.75\%$  and the cost supported by the EU is €90 million. More details can be found in Annex 13.

### 9.2.2. *Member State budgets*

**Options 1 and 2** would impose no additional burden on Member State budgets.

**Option 3** requires compulsory national co-financing in addition to obligatory private financing. Therefore, it remains the choice of the individual Member State to define the budgetary allocation.

In the case of the variant of this option with an immediately increased budget allocation, this compulsory co-funding from Member states and the sector would have to be equally increased with a minimum sector contribution of 20% of the total budget. The contribution of the respective Member states remains voluntary.

**Option 4** requires co-financing from Member States accompanying measures to the value of at least 50% (or 25% in convergence regions) of the EU funding received for the purchase of produce.

In addition, national expenditure should finance the accompanying measures, although some financial support could be available through the EU's promotion programmes<sup>56</sup>. As the choice and range of these measures will be left to the discretion of Member States, the overall cost could vary. Examples show wide cost variations, e.g. "Food Dudes" in Ireland with 60% of the overall budget and "Fruitbreak" in Denmark with 6% of the overall budget.

Therefore, no budget estimates for accompanying measures are included in this report. Everything depends on how the Member States implement the scheme.

"Health" savings cannot be quantified but should be substantial over time<sup>57</sup>.

## 9.3. **Health and social impacts**

### 9.3.1. *Public health*

The intended impact is to foster healthy eating habits among school children, so contributing to a lasting improvement in health and a decline in obesity: maintaining healthy body weight and reducing the risk of chronic non-communicable diseases.

**Option 1** would not achieve this intended impact, as they do not provide for the creation of an SFS. **Options 2 and 3** could have a limited impact on the cohesion aspect by contributing to improve the effectiveness of existing SFS through exchanges of experiences.

**Option 4** could allow for produce to be provided to schools in all EU regions and so could have the strongest impact amongst the proposed options.

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<sup>56</sup> Council Regulation (EC) No 3/2008 of 17 December 2007 on information provision and promotion measures for agricultural products on the internal market and in third countries.

<sup>57</sup> In its contribution to the SANCO Green Paper 'Promoting healthy diets and physical activity' in March 2006, IOTF has already called for an economic analyses "not only including the health care costs but also the impact of disability, time off work, and reduced economic productivity due to illness" in order for SANCO to argue its case in general policy making terms with the rest of the Commission".

### 9.3.2. *Promoting equal opportunities*

The intended impact is to facilitate access to initiatives promoting the consumption of fruit and vegetables by school children in poorer regions and among disadvantaged sections of the population.

Providing free fruit and vegetables to school children contributes to better nutrition and health and therefore may also have a positive influence on learning ability and life expectancy. It is acknowledged that a lack of appropriate nutrition influences learning ability. Data shows that children from poor or deprived families quit school more often than other children or end up with insufficient reading and writing skills<sup>58</sup>. Among many other causes, poor nutrition is one.

School fruit schemes are one way of combating poor nutrition. Some studies suggest that free school fruit and vegetable schemes can help lessen diet inequalities among different SEGs and reduce the consumption of confectionery, crisps and sweetened soft drinks, especially in lower SEGs<sup>59</sup>.

Here again, the impacts would be significantly greater under **Option 4** than **Option 3**: As fruit and vegetable products would be provided free of charge this option could have an impact on consumers in lower SEGs. It would be left to the discretion of Member States to address health and education issues under accompanying measures.

**Options 1 and 2** would have practically no impact at all.

### 9.3.3. *Employment and job creation*

As fruit and vegetable production is labour intensive, increased production would imply increased labour demand and it is expected that it could have some positive effect on employment and job creation linked to innovation and research. These impacts could be stronger under **Option 4** than **Option 3**.

## 9.4. **Bringing the CAP and Europe closer to the citizen**

The intention is to contribute to reconnecting urban citizens with food and its producers, and in this way enhance perceptions about agriculture, the CAP and the EU.

**Option 1** would not have any effect on achieving this objective. **Options 2 and 3** given their informative nature could moderately contribute to the achievement of this goal, with the effect being stronger in the case of Option 3.

**Option 4** is well placed to address this issue as public opinion would see that the EU agricultural budget is spent on issues which are close to their real concerns.

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<sup>58</sup> EC 2008, Child Poverty and Well-Being in the EU, Current status and way forward.

<sup>59</sup> Bere E., Veierod M. B. & Klepp, K. I. 2005, "The Norwegian School Fruit Programme: evaluating paid vs. no-cost subscriptions", *Prev.Med.*, Vol. 41, No 2, pp. 463-470.

## 9.5. Environmental impacts

As the management of any scheme would be decentralised, the environmental impact of the different options would mainly depend on how they are implemented by the local authorities, the school community and health authorities. Possibilities could include giving priority to integrated pest management products, organic products, seasonal or limited "environmental foot-print" products. In the designation of products eligible under the scheme an intention which could have a positive impact on the environment could provide an additional criterion for the overall evaluation of the scheme.

Any increased consumption of processed and packaged produce could have a negative impact on the environment, due to increased waste from packaging. However, as long as the fruit and vegetable products provided by a School Fruit Scheme replace other packaged products, such as canned drinks, potato crisps and sweets, the net impact should at worst be neutral.

## 9.6. Administrative impacts

To identify the administrative impact of the options, it is necessary to define the management and implementation structure of each option. In order to build on experience, increase practicability and facilitate implementation the starting point in each case is an existing policy implemented by DG AGRI. The analysis is developed further in Annex 14; the main conclusions are as follows.

**Option 2:** These activities would be supported by DG AGRI. There would be no significant additional burden on either Member States or the Commission.

Implementation would be directly handled by Commission services, in active cooperation with Member states and the sector as well as civil society by participating in events and the network.

**Option 3:** Implementation would be based on the Regulation 3/2008, using the standard shared management procedure. The Commission and most Member States have a long experience of managing this type of programme, which requires, however, rather complex procedures involving several levels of administration and necessitates both a significant financial as well as organisational effort from project promoters.

Member states will have to make additional resources available for the management and control of the new programmes, in order to launch the necessary annual call for proposal based on guidelines established by Commission implementing rules.

Projects have to be co-funded by 50%, of which the project promoters have to contribute at least 20%. Member states can also contribute, but this is not an obligation, thus further increasing the financial burden for the project applicants.

Submitted projects have to undergo a selection process at Member states level before submission to the Commission, which has to approve the list of selected projects of every Member state.

In the case of the variant of option 3 with an immediate significant increase of the available EU budget, not only would more co-funding means have to be made available but also, as

more project applications could be expected, thus requiring additional administrative resources on Member state level.

Reporting and control requirements involve actors on three levels: national authorities regarding the project selection process, compulsory co-funding, and regular implementation and financial management reports of the recipient (Paying Agency). Project promoters will have to report on expenditure incurred, activities delivered and co-funding provided. The final beneficiary (the school) has to report on the participation of eligible persons and the appropriate use of funding.

The fact that all projects are EU co-financed entails a significant increase in control obligations on the European level. If the increase in budgetary means would be limited, so would the increase in controls be. But with a possible significant increase of EU funding, also the control obligations would significantly increase.

**Option 4:** While the clear eligibility criteria of EU co-financing greatly simplify the management and control of programmes, additional resources will be needed at Member State level.

Member States will apply for their respective budget allocation based on a national SFS strategy which identifies, among other things, the necessary funding for accompanying measures. These would have to be in line with pre-established Commission guidelines.

The Commission would allocate the EU budget according to the pre-defined key, check the National Strategy for compatibility with the guidelines and collect and process the regular implementation report as received from Member states competent authorities.

The supply of produce to the beneficiary (school children) can be delivered by one single body, which purchases the goods for distribution, regularly reporting to the recipient (Paying Agency) on costs incurred, quantities delivered and eligible children supplied. Such a one-stop implementation structure facilitates both reporting and control obligations, which could be limited to this one actor.

Currently, there are several different implementation models of School Fruit Schemes existing in the EU-27. In respect of the principle of subsidiarity, the continuation of these models in line with Member states needs and objectives will be supported. For the Commission, a general model of implementation could take the School Milk Scheme in its revised format as a point of departure:

First at European level, Member states notify to the Commission a single contact point in charge of the administration of the Scheme. This Single Contact Point serves as the recipient of the EU funds and the matching Member states co-funding which is the Agriculture and Rural Development Paying Agency. This body would be in charge of the establishing and managing of an (preferably) e-based reporting system which collects and submits the following two data components on a regular (in line with the frequency of produce distribution) intervals:

- number of eligible children (total, per school and per age group) receiving produce under the scheme,

- amount disbursed (total, per school, per age group) for the purchasing and the supply of produce for distribution.

This would imply that at the level of the beneficiary, the school and even more so, the final beneficiary, the school children, only the limited task of registering participating children would have to be performed which subsequently becomes part of the regular reporting.

As part of the control obligations, general conditions would have to be fulfilled: All invoices will have to be externally certified and the basic purchasing system as such would have to be certified.

As part of the *ex-post* controls, based on a risk analyses, on every level of the distribution chain 10% of total value of produce and on the level of beneficiaries, 5% of all schools are to be checked for eligibility of children.

Establishing a centralised system, based on a Single Contact Point, the administration of the Scheme should be as simple and efficient as possible, thus minimising the administrative impact of the option 4 on Member states and Commission alike.

As it is up to the Member State to designate the implementing bodies, the necessary flexibility in according the respective administrative and education system is allowed: it could be a school board, regional authorities or a wholesaler, in line with Member State requirements.

More details on the administrative impacts of the options can be found in Annex 14.

## **9.7. Impact on third countries and international relations**

The intended impact is neutral. An EU SFS would have to be in full accordance with the EU's international trade obligations. The impact of Options 1 and 2 would be neutral as they do not involve any direct purchase of products. For Options 3 and 4, supplies might be partly met by imports. These represent roughly 5% for vegetables and 22% for temperate fruit (2006 data). For more details see Annex 8.

## **9.8. Proportionality and European Value Added**

Options 2 and 3 represent a "traditional" type of EU action, implemented for many years by the Commission. Their proportionality as to achieving the given objectives is in this sense a given and confirmed fact. On the other hand, due to their very limited budget and "soft measures" characteristics, they are not likely to have any tangible impact achieve the stated objectives.

The question of proportionality and EU value added is more relevant to Option 4, with its more substantial financial means. The compulsory accompanying measures integrating communication and educational aspects would further strengthen its effect.

That being said, it would be a mistake to say that an EU School Fruit Scheme could provide a panacea for the low fruit and vegetables consumption among children and the related health problems, as well as providing stable outlets for production. The School Fruit Scheme in the form of Option 4 should be seen rather as a contribution to reaching these goals, with the potential to generate a significant **multiplier effect**.

European value added is delivered in several different aspects:

- facilitating know-how transfer and experience exchange between all stakeholders in School Fruit Schemes around the European Union and in third countries (Option 2);
- promoting Fruit and Vegetable schemes for school children in Member States and regions where no (or limited) schemes currently exist (Option 3 marginally and Option 4 mainly);
- mobilising local and regional sector-linked initiatives by providing additional EU-funding (Option 3);
- coordinating the design and implementation of School Fruit Schemes by establishing a common framework and subsequent implementation rules (Option 4);
- providing sustainability to existing and newly-created schemes with a medium-term perspective, by possibly providing a multi-annual financial ceiling (Option 4);
- ensuring transparency and accountability by integrated compulsory monitoring and evaluation measures in every SFS (Option 4);
- safeguarding long-term effectiveness by carrying out a mid-term evaluation as the basis of possible modifications to the content and running time of the SFS (Option 4).

In conclusion, it seems clear that the maximum effectiveness of an EU SFS could be achieved by combining Options 2 and 3 and 4.

## **10. COMPARING THE OPTIONS**

### **10.1. Options judged according to the objectives (intended impacts) and other impacts**

The findings in Section 9 "Analysing the Options" are summarised in the following table. The four options are judged according to the set of criteria reflecting specific objectives of a SFS at EU level (intended impacts – see Section 7) and other identified and analysed impacts. For details see Section 9 (e.g. for impact on budget see point 9.2; for EU value added see point 9.8).



|  | Status Quo | Networking | Supporting initiatives <sup>(1)</sup> | Driving initiatives |
|--|------------|------------|---------------------------------------|---------------------|
|--|------------|------------|---------------------------------------|---------------------|

#### ECONOMIC IMPACTS

|  |   |   |   |    |
|--|---|---|---|----|
| Impact on F&V prices   | ☹ | ☹ | ☹ | ☹  |
| Impact on F&V market   | ☹ | ☹ | ☹ | 😊😊 |
| Innovation and research  | ☹ | ☹ | 😊 | 😊😊 |
| Direct and sustainable increase of fruit and vegetable consumption among school children | ☹ | ☹ | 😊 | 😊😊 |
| Appropriate use of EU funds (cost effectiveness)   | ☹ | ☹ | 😊 | 😊😊 |
| Appropriate use of MS funds (cost effectiveness)   | ☹ | ☹ | 😊 | 😊😊 |

#### HEALTH AND SOCIAL IMPACTS

|  |   |   |   |    |
|--|---|---|---|----|
| Increase in the awareness of the role of fruit and vegetables in a healthy diet    | ☹ | ☹ | 😊 | 😊😊 |
| Increase in the percentage of socially disadvantaged pupils to benefit from an SFS | ☹ | ☹ | 😊 | 😊😊 |
| Employment and job creation  | ☹ | ☹ | 😊 | 😊😊 |

#### ADMINISTRATIVE IMPACTS

|   |   |   |   |   |
|---|---|---|---|---|
| Administrative burden for Commission                | ☹ | ☹ | ☹ | ☹ |
| Administrative burden for MS and school authorities | ☹ | ☹ | ☹ | ☹ |

#### OTHER IMPACTS

|   |   |   |                   |                   |
|---|---|---|-------------------|-------------------|
| Proportionality and EU value added                              | ☹ | 😊 | 😊                 | 😊😊                |
| Bringing agriculture, the CAP and the EU closer to its citizens | ☹ | 😊 | 😊😊                | 😊😊😊               |
| Positive impact on environment                                  | ☹ | ☹ | 😊😊 <sup>(2)</sup> | 😊😊 <sup>(2)</sup> |
| Trade with third countries                                      | ☹ | ☹ | 😊                 | 😊                 |

😊😊😊 strong  
very positive impact

😊😊 very positive impact

😊 positive impact

😊 neutral impact

☹ negative impact

(1) Depends on the budget MS are prepared to mobilise.

(2) Depends on how the scheme is implemented.

## 10.2. Would the options meet the stated objectives – views of consulted parties

Option 4 (and often Option 4 plus Options 3 and 2) is clearly preferred by stakeholders, without any distinction as to their professional background.

|                  | Status Quo | Networking | Supporting initiatives | Driving initiatives |
|------------------|------------|------------|------------------------|---------------------|
| Agri-food sector | ☹          | ☺          | ☺☺                     | ☺☺☺                 |
| Health           | ☹          | ☺          | ☺☺                     | ☺☺☺                 |
| Public           | ☹          | ☺          | ☺☺                     | ☺☺☺                 |
| Civil society    | ☹          | ☺          | ☺☺                     | ☺☺☺                 |

☺☺☺  
very much preferred

☺☺  
preferred

☺  
satisfactory

☹  
neutral

☹  
negative

## 10.3. Impact of the Options on stakeholders

The following table summarises the estimated impact of each option on different identified stakeholders. Options 2, 3 and 4 represent an improvement as compared with the *status quo*, even if the scale of improvement differs significantly between them.

Taxpayers could potentially benefit from the reduction of national health expenditure what is expected to be seen in the years following implementation of the scheme.

However, it should be mentioned that, with the current estimates of financial discipline, additional expenditure of this magnitude could mean application of higher financial discipline in 2013 and, in the worst case scenario, also more in 2011 and 2012.

|                        | Positive<br>+100                               | 0                                 | Negative<br>-100 |
|------------------------|--|-----------------------------------|------------------|
| Status quo             |  | Consumers<br>Producers<br>Traders | Taxpayers        |
| Networking             |  | Consumers<br>Producers<br>Traders | Taxpayers        |
| Supporting initiatives |  | Consumers<br>Producers<br>Traders | Taxpayers        |
| Driving initiatives    | Consumers<br>Producers<br>Traders<br>Taxpayers |                                   |                  |

#### 10.4. Summary of advantages and disadvantages of each option

|                               | <b>Advantages</b>   | <b>Disadvantages</b>   |
|-------------------------------|---|--|
| <b>Status Quo</b>             | <ul style="list-style-type: none"> <li>• No additional budgetary effort (both EU and MS)</li> <li>• No additional administrative effort (both EU and MS)</li> </ul>   | <ul style="list-style-type: none"> <li>• No positive impact on fruit and vegetable consumption</li> <li>• No new outlets for fruit and vegetable producers</li> <li>• No positive impact on health</li> </ul>  |
| <b>Networking</b>             | <ul style="list-style-type: none"> <li>• Limited budgetary effort (both EU and MS)</li> <li>• Limited administrative effort (only on EU side)</li> <li>• Improve the effectiveness of SFS</li> <li>• Increase awareness among EU citizens about the link between fruit and vegetables, diet habits, lifestyle and the problem of obesity</li> </ul>   | <ul style="list-style-type: none"> <li>• Limited impact on fruit and vegetable consumption</li> <li>• Limited outlets for fruit and vegetable producers</li> <li>• Insufficient impact on health</li> </ul>  |
| <b>Supporting Initiatives</b> | <ul style="list-style-type: none"> <li>• Positive impact on consumption of fruit and vegetables</li> <li>• New outlets for fruit and vegetable producers</li> <li>• Positive impact on health</li> </ul>  | <ul style="list-style-type: none"> <li>• Requires budgetary effort (mainly on MS side)</li> <li>• Requires administrative effort (mainly on MS side)</li> <li>• Advantages relevant only for regions covered by a scheme</li> <li>• No particular stimulation of fruit and vegetable consumption in more disadvantaged regions and social groups</li> <li>• Free distribution of produces not eligible for funding</li> <li>• Private co-financing compulsory</li> </ul> |
| <b>Driving Initiatives</b>    | <ul style="list-style-type: none"> <li>• Stronger positive impact on fruit and vegetable consumption</li> <li>• New outlets for fruit and vegetable producers</li> <li>• Support innovation</li> <li>• Positive impact on health</li> <li>• Advantages relevant to all Member States, regions and social groups, including the disadvantaged</li> <li>• Private co-financing possible</li> <li>• Easy to control on EU side</li> <li>• Co-financing increases Member State co-responsibility</li> <li>• Preferential treatment for convergence regions</li> </ul> | <ul style="list-style-type: none"> <li>• Requires budgetary effort (on EU and MS side)</li> <li>• Requires administrative effort (mainly on MS side)</li> </ul>  |

## 11. MONITORING AND EVALUATION

A systematic, integrated approach to monitoring and evaluation of a SFS aims to meet two objectives:

- first, to ensure transparency in the implementation of the scheme by requiring the implementing bodies to refer to a standard set of indicators applicable for all initiatives, which are based on minimum requirements;
- second, to allow for an independent assessment of the effectiveness and efficiency of the scheme both on an individual basis and at European level, in order to advise on necessary adaptations, including cessation, prolongation or extension.

Regarding the latter objective, it is anticipated that, as part of the suggested 5-year programme, a review will take place after three years, to assess budgetary uptake and the scheme's impact. This review will be carried out by external evaluators and funded by the Commission's own resources.

Regarding the first objective, the experience of a number of ongoing SFS, notably in Ireland and England, would form the basis of a common EU approach. There are essentially two evaluation models:

- an **accompanying approach**, in which a selection of participating school children (e.g. one school) is compared with a group of school children not participating in the SFS. This allows the immediate and short term impact of the SFS to be identified, notably the children's increased consumption of fruit and vegetables. This model was used by the Irish Food Board (*Bord Bia*) in cooperation with the University of Bangor to evaluate the Irish Food Dudes project;
- the **ex-post approach** is the in-depth evaluation of an SFS once it has finished in order to identify its long-term impact, in terms of a sustainable increase in consumption. The instrument applied is the Child and Dietary Evaluation Tool (CADET) which combines records of what children eat over a 24 hour period with a questionnaire for the school and parents. This approach has been used by the UK Department of Health (in cooperation with the National Foundation for Educational Research and the University of Leeds) to evaluate the SFVS.

Minimum evaluation standards for Member States would be included in the implementing rules of a possible Council Regulation for a SFS.

The table below describes a basic set of indicators for the evaluation of SFS, based on the general, specific and operational objectives elaborated during the IA process.

**TABLE: Set of indicators**

| <b>General objective</b>     | F&V consumption                       |   |   |  |   |   |  |   |  |
|------------------------------|---------------------------------------|---|---|--|---|---|--|---|--|
| <b>Specific objective</b>    | <b>Public health</b>                  | <b>Eating habits</b>                      | <b>Agricultural markets</b>               | <b>Regional &amp; social cohesion</b>              | <b>Budgetary cost &amp; value for money</b>               | <b>Subsidiarity &amp; EU added value</b>        | <b>Environment</b>                           | <b>Third countries</b>                      | <b>Citizens</b>                                    |
| <b>Operational objective</b> | Decrease of obesity                   | Sustainable increase of F&V consumption   | Increase of F&V sales                     | F&V consumption with deprived persons              | Efficiency in disbursement of public funds                | Additional activities to on-going MS activities | Decrease of negative impact on environment   | Access of products to EU market             | Awareness of benefits of increased F&V consumption |
| <b>Indicator(s)</b>          | Rate of obese persons in population   | Increase in F&V consumption with children | Increase of F&V consumption in EU-27      | Increase of F&V consumption in convergence regions | Additional funds for F&V available to school children (€) | Additional F&V available to school children     | Increase in local F&V purchases of local F&V | WTO-conformity of F&V purchasing conditions | Participation of schools in F&V schemes            |
|                              | Rate of increase in obese persons     | Increase in F&V consumption with families | Increase of F&V sales directly to schools | Increased F&V consumption with deprived persons    |   | Additional F&V related activities in schools    | Increase in organic F&V purchases            | Eligibility of non-EU F&V produce           | Participation of health authorities in F&V schemes |
|                              | Rate of childhood obesity             | Long-term increase in F&V consumption     | Increase of F&V sales by registered POs   |  |   |   |  |   |  |
|                              | Incidence of obesity-related diseases |   |   |  |   |   |  |   |  |

## 12. CONCLUSIONS

In order to achieve the goal of **increased consumption**, a first step would be to make more intensive use of the existing Commission instruments. This would apply, in particular, to actions under Option 2, based on DG AGRI's existing external communication activities, and Option 3, based on the information and promotion measures for agricultural products.

Option 3 could provide the basis for an EU SFS, if it were extended to allow for the possibility of providing free produce – so bringing it closer to Option 4. There are several reasons why this appears inadvisable:

- as this option is solely demand-driven, some Member States would not be stimulated to implement programmes;
- it would require private co-financing which, as has been emphasised in the consultation process, is a major obstacle to developing schemes;
- the range of financial actions is less clearly defined compared to Option 4, which would increase the administrative burden, mainly for Member States.

From the point of view of sound management, it is more efficient and effective to implement a **specific** scheme to meet a **specific** need, rather than introducing major modifications to an existing scheme that was put in place for other purposes.

### A more proactive approach

But this would not be enough. There is economic and legal scope for a **more proactive EU approach** as described by Option 4, which has also received the greatest support from all categories of stakeholders - not only the agricultural sector but also from health and education NGOs.

Option 4 is the most effective way of **achieving the objectives** of increasing consumption and improving health, if its implementation strictly respects the subsidiarity principle and national competences, in particular on health and education. Its effectiveness would be increased if complemented by Options 2 and 3.

In this context it is proposed to set up a School Fruit Scheme which, for maximum effectiveness, brings together the three options in a mutually supportive package. It would comprise the following elements:

- **Free distribution of fruits and vegetables** in schools. Community aid should be granted to co-finance the supply of fruit and vegetables to pupils in educational establishments, the related logistics and monitoring and evaluation. For this purpose, it is proposed to provide for a budgetary allocation of a total amount of EUR 90 million under Title I of Council Regulation (EC) No 1234/2007. It would allow for the extension of existing SFS in some Member States, and the establishment of programmes in MS without such programmes, often due to limited budgetary means.  
The Community co-financing rate would be at the level of 50% and 75% in convergence regions.
- **Accompanying measures.** An obligation for Member States to develop a national strategy in consultation with public health and education authorities, industry and

interested stakeholders. The strategy should lay down in which manner a School Fruit Scheme could be best implemented and integrated into the school curriculum. As part of the implementation it would be an obligation to highlight the EU involvement. The accompanying measures would primarily be nationally financed.

- **Networking activities**, in order to motivate the exchange of information and knowledge among SFS actors and stimulate public awareness (as presented in Option 2 "networking"). This allocation should amount to EUR 1.3 million.
- **Promotion of agricultural products**, which could be supported in the framework of the EU promotion of agricultural products (as presented in option 3 "supporting initiatives"). In particular, MS could use this framework to carry out the necessary accompanying measures aimed at raising awareness on the beneficial effects of fruit and vegetables consumption. The recent fruit and vegetables reform increased the indicative budget for the promotion of these products by EUR 6 million.
- **Monitoring and evaluation**. With the purpose of establishing solid data for further research on the effectiveness of a School Fruit Scheme in its different variants and for the exchange of "best practices", monitoring and evaluation should form an integral part of an EU scheme.

All schemes would consequently include the three elements:

- the free distribution of fruit and vegetables in schools;
- a series of accompanying measures;
- monitoring and evaluation.

Option 4 entails a significant **budgetary cost**, both for the European Union and the Member States. In order to be effective and efficient, products should be distributed free of charge to the core target group (all children between 6 and 10) for a sufficient number of weeks over a long enough period. Member States will be free to choose the frequency of produce distribution.

A total annual budget of €156 million is needed. The EU's participation of €90 million would obviously have to fit into the agricultural financial perspectives. Only experience will show if the budget available is appropriate to achieve the set objectives.

An important political decision would need to be taken. Up to now, the Commission has considered a School Fruit (and vegetable) Scheme to be "a step in the right direction" and the Council as a necessity "as soon as possible", as long as it is deemed practical and account is taken of the administrative costs.

If the Commission decides to propose, and the Council to approve an SFS, the most important conditions that should be met in order for the Scheme to be efficient and effective should be explicitly included in the legal text, some in the Council Regulation but the great majority in the implementing rules. These essential conditions for success as analysed in this report are based on the experience of AGRI and other Commission services with similar policies, the experience of Member States and the respective School Fruit Schemes and, finally, the scientific evidence available.