



**A GOOD
PRACTICE
REPORT**

AUGUST 2015

**SUSTAINABLE
PUBLIC PROCUREMENT
OF SCHOOL CATERING
SERVICES**

About INNOCAT

INNOCAT aims to help encourage eco-innovation in the catering sector by providing a sizeable launch market for new solutions. The project brings together public and private buyers to publish a series of tenders for eco-innovative catering products, services and solutions.

About the report

This report highlights the many clever and innovative approaches being used by European public authorities to procure more environmentally and socially sustainable, and innovative catering services.

The report includes a number of best practice case studies from cities across Europe, including Malmö (Sweden), Copenhagen (Denmark), Torino (Italy) and East Ayrshire (Scotland), and also provides a wealth of ideas, inspiration and further resources for those who are involved in the procurement of food and catering services for schools.

Authors

Caroline Chandler, Antoinette Franklin, Amalia Ochoa, Simon Clement
(ICLEI – Local Governments for Sustainability)

Contributions and acknowledgements

Flury Bastian (ETH Sustainability), Tamara Bruning (City of Ghent), Alessandro Cerutti (University of Turin), Antoine Gobin (City of Lens), Robin Gourlay (Scottish Government), Rossana Guglielmetti (City of Turin), Anya Hultberg (Copenhagen House of Food), Betina Bergmann Madsen (Municipality of Copenhagen), Mia Malin (City of Helsinki), Dr Leigh Mapledoram (WRAP), Maurizio Mariani (Risteco), Elina Ojala (Motiva), Roberta Sonnino (University of Cardiff), Carola Strassner (University of Münster), Richard Watts (Soil Association), Turin Chamber of Commerce

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Introduction

School catering is closely linked to cultural heritage and wellbeing. The way people eat is seen as a reflection of societal values, providing children with nutritional and social principles which are believed to remain with them into their adult life. School meals are therefore an important issue within most European countries, as they cut to the heart of citizen's values and family life. All 28 European Union member states, plus Norway and Switzerland, have some form of school food policy in place, outlining voluntary or mandatory nutritional guidelines and other standards.¹ This suggests that school catering touches all countries in Europe to a greater or lesser extent.

The catering sector is a significant contributor to greenhouse gas emissions. Conventional food production, processing, delivery and preparation processes are linked to heavy consumption of fossil fuels as well as significant soil and water pollution, proliferation of plastic and other non-organic waste, and local air pollution caused by transportation within cities. A report published by the European Commission's Joint Research Centre (JRC) in 2006 showed that food consumption is responsible for 20-30% of the various environmental impacts of total consumption, and in the case of eutrophication for more than 50%.² The JRC estimates that the social food and catering market in the European Union was worth €70.6 billion in 2010, €45.7 billion of which was operated by the public bodies themselves.³ The importance of food as a product group within public procurement budgets depends on the country in question. In Finland, for example, food is the third most significant consumption factor in terms of environmental impact and environmental resource use.⁴

Public procurement of catering services is governed by the same European and international rules as other procurements. At a global level, the Global Procurement Agreement obliges WTO member states to abide by principals of non-discrimination and equal treatment, regardless of the product origin. The

EU Procurement Directives, the most recent version of which was published in early 2014, provide the main reference point for most public procurers within the European Union. The EU Public Procurement Directive 2014/24/EU is applicable to all European public works contracts, public supply contracts and public service contracts over €207,000⁵. The Directives provide considerable scope to include sustainability criteria within public tenders.⁶

Local authorities trying to implement sustainable procurement practices face a number of practical and perceived barriers. When it comes to food, key problems include a perception of (higher) cost implications, legal uncertainties and a limited knowledge of improved solutions available. By drawing together methods and approaches used in schools across Europe, this report aims to help dismantle some of these barriers. Eco-innovation can help re-invent our approach to public procurement of catering services, leading to the procurement of food with a smaller carbon footprint.

A great many European schools and local authorities are developing innovative and interesting ways to improve the sustainability of their catering services. Catering companies are also becoming ever more aware of the importance of sustainability, and the growing demands of their customers. New business models and eco-innovative products are making sustainable school catering easier, achievable and more affordable.

This report is structured around a brief overview of the key problem areas which local authorities looking to procure more sustainable catering services find themselves faced with. For each problem area, we have put forward a range of ideas and practical solutions that have been tried by different cities and schools across Europe. More in-depth case studies look at eco-innovative approaches being taken to the procurement of school catering services in Turin



"fresh oranges" (stock photo) by dominiquelanda

(Italy), Copenhagen (Denmark), Malmö (Sweden) and East Ayrshire (UK).

A brief selection of research, reports and practical tools which may help shed more light on each topic is also included at the end of this report. For those who wish to find out about a given topic in more depth, the resource inventory provides further information on research, policies, case studies and eco-innovative solutions that are currently available on the market to provide ideas and inspiration.

Within this publication, we have chosen to keep as closely as possible to areas which are

directly related to public procurement.

The report does not go into detail about social and educational aspects and doubtless leaves out a number of initiatives that, whilst important in the greater debate surrounding school food, are not impacted by procurement activities.

- 1.) *Mapping of national school food policies in the EU*, <https://ec.europa.eu/jrc/sites/default/files/bna26651enn.pdf> (27.07.2015)
- 2.) <http://ftp.jrc.es/EURdoc/eur22284en.pdf> (27.07.2015)
- 3.) *Complementary information to the Questionnaire on EU GPP Criteria for Food and Catering Services*, JRC, March 2015
- 4.) <http://www.sitra.fi/en/blog/industrial-symbiosis/sidestreams-food-money> (27.07.2015)
- 5.) http://ec.europa.eu/internal_market/publicprocurement/rules/current/index_en.htm (27.07.2015)
- 6.) *The Buying Green guide provides a comprehensive overview of the EU public procurement Directives and suggestions of how to implement GPP criteria.*

School catering: An overview

2.1 CHANGING ATTITUDES TO SCHOOL FOOD

In the years following the Second World War, school catering was seen as part of a broader social contract to ensure that children received at least one nutritious meal a day. This aim still exists in schools, but the ongoing commercialisation of food since the 1980s has been compounded by budget cuts caused by the financial crisis of 2008. In many cases, this has led to a narrow focus on cost-saving rather than a more holistic approach encompassing quality, nutrition and sustainability.

This economic focus can be seen in many of the difficulties faced by those responsible for managing school catering services. In spite of these problems, many local authorities are rethinking their catering systems and using innovative approaches to ensure that the quality and sustainability of school food remains high.

2.2 BUDGETARY AND PRICING CONSTRAINTS

Across Europe, local authorities and public services are finding themselves facing a severe financial crisis which impacts on all areas of public spending. School catering is no exception to this rule, with food budgets sometimes being set as low as €0.50 per meal.⁷ A mindset focused purely on buying the cheapest option available at point of purchase can be particularly difficult to overcome, as sustainability is often perceived as an optional expense rather than a way to cut costs in the longer term.

Tight budgets need not prevent a move towards greater sustainability. Often, small adjustments in procurement policy can lead to impressive cumulative results. In the former French mining City of Lens, for example, it was specified that 20 percent of the food provided to each school must be organic. Importantly, this sent a clear

signal to parents, producers and politicians of the city's intention to reduce the environmental impact of their catering services.⁸

Changes which could have an impact on upfront costs, such as switching to or increasing the proportion of organic food, can often be offset by using cheaper cuts of meat, adapting menus by reducing the quantity of meat included in recipes or by cutting it out altogether. As meat production is a large source of emissions, the introduction of vegetarian menus can help cut costs and reduce the overall environmental impact of the catering service.

Furthermore, innovative solutions do not have to be expensive or high tech. Indeed, a focus on aspects such as energy efficiency and waste reduction can often bring operation costs down. The purchase of clear instead of opaque waste bags is an example of a small and inexpensive eco-innovation which enables those responsible for preparing food to see what is being thrown away and consider how this could be reduced.

Finally, higher quality meals could also lead to an increased number of pupils opting to eat in the school canteen. This creates what could be described as a virtuous circle, with more children paying for dinners bringing more food into the school food budget and therefore allowing for more investment in the catering service.⁹

Some ideas for improvement

The introduction of weekly meat-free Thursdays in Ghent (Belgium) has helped keep costs down, reduce environmental impact and provide an entry point to educate pupils, parents and kitchen staff on the environmental impacts of food production.

The Municipality of St Frézal de Ventalon (France) introduced a catalogue which enabled parents to order organic products along with the school. This allowed them to purchase in bulk and reduce prices.¹⁰ In Malmö (Sweden) and Copenhagen (Denmark), menus are planned using a slightly different composition of ingredients to enable the purchase of organic food within a conventional budget. This is done by reducing meat, purchasing seasonal food, balancing expensive and cheaper food types and minimising food waste.

In the London Borough of Merton (UK), a focus on improving the quality of school meals led to a significant increase in uptake. This brought more money into the catering budget and gave caterers more freedom to focus on buying high quality produce from sustainable sources.

Food need not be pre-processed in order to be cheap. In Älvkulle high school in Karlstad (Sweden) the purchase of a meatball machine enabled the school to control the quality of the meat used and the cooks to produce fresh meatballs in less time, at lower cost and with less wastage.

A selection of relevant tools and resources

Meat-free Thursdays are a very successful Belgian scheme to raise awareness about reducing meat. The homepage provides recipes, advice etc (in Flemish)

Short videos introduce the concept of meat-free Mondays in schools

The Copenhagen Green Food Basket and the Children's Food Trust Seasonal Charts are used to ensure a balanced menu, both nutritionally and economically.

WRAP case study on using clear plastic bags in Ilfracombe (UK)

The Soil Association School Food Plan gives suggestions for headteachers to increase uptake and improve quality of school meals.

This Guide provides good advice on how to successfully introduce organic food into schools (in French).

All tools and resources can be found in the inventory at the end of this report. An online version of this report with links to the relevant resources can be found at:
www.sustainable-catering.eu/publications

7.) *School Food Revolution*, p.xiv: quoted as 32-38 pence

8.) For more information on this initiative, see the GPP Helpdesk Case Study: http://ec.europa.eu/environment/gpp/case_group_en.htm (19.08.2015)

9.) http://www.schoolfoodplan.com/wp-content/uploads/2013/07/School_Food_Plan_2013.pdf (27.07.2015)

10.) *Proposer des produits locaux et de qualité en restauration collective: ils le font!*, Direction Régionale de l'Alimentation, de l'Agriculture et de la Forêt du Languedoc-Roussillon, May 2014, http://draaf.languedoc-roussillon-midi-pyrenees.agriculture.gouv.fr/IMG/pdf/fiche_introductive_10-2015_cle4821ca.pdf

2.3 OUTSOURCING CATERING SERVICES

Since the mid-twentieth century, there has been a general shift away from in-house school catering towards contracting privatised catering services to provide school meals. A good deal of debate surrounds this transition. The privatisation process is closely linked with a commercialisation of the food sector more generally, which has had a number of negative effects. As school catering moves from being viewed as a not-for-profit service to a profitable business venture, it runs the risk of losing its more social aspects and being seen purely as a utility/financial exchange.

A problematic side-effect of outsourcing school meals can be the outsourcing of responsibility for their quality and provenance. Research by German academic Carola Strassner has shown that when school meal systems are embedded and stakeholders (parents, pupils, teachers etc) are involved in a participatory format, a great deal can be achieved in terms of quality and sustainability. The loss of a direct link between stakeholders and the catering service can have financial implications, as those setting the budgets are less directly aware of the impacts caused by their actions. Between 1996 and 2010, despite general inflation, there was very little increase in the value allocated to meals when tendering in many local authorities. This has led to a squeeze on food budgets and can often result in lower quality food.

A difference in expenditure can be seen between cities which have maintained public catering services and cities which have outsourced the contract. Cities which own the catering services tend to maintain greater autonomy over their food procurement. In the City of Copenhagen (Denmark) for example, catering services are still owned by the city. This enables them to focus on purchasing high quality, organic food and – in some kitchens – making savings by buying whole animals and ensuring they use all the parts of the animal. The most significant savings come from careful menu planning, which allows for the purchase of food when it is in season and balances

expensive purchases with cheaper items on the menu to keep on budget.

It is important to note that outsourcing of catering services doesn't have to mean a reduction in quality or less sustainability. Procuring external catering services still provides a lot of opportunity for eco-innovation. Much can be done within a tender for catering services to ensure that standards remain high. A service-level agreement can specify the provision of organic foodstuffs, vegetarian menus, training for staff, use of low emissions vehicles for food transportation and ecological cleaning products, to name just a few options. Maintaining a good relationship with the service provider is very important in this context, as it enables them to better understand and meet the city's vision for a more sustainable catering service.

Councils such as Gloucestershire (UK) have outsourced their catering contracts, but have still found space to include innovative sustainability criteria within their tenders. Gloucestershire has introduced a range of environmental requirements, with a point being given to 'principles of sustainability' in the award phase. These principles are defined as "buying products that are resource efficient (for example in terms of water and energy consumption), buying bio-degradable products, buying resources such as wood from sustainable managed sources, and buying products with minimum transportation impacts.¹¹ In their most recent catering tender, Turin (Italy) introduced a number of measures and included various criteria into their current school catering contract aiming to reduce the associated carbon footprint. These included energy efficient appliances bought for schools, the utilisation of mains tap water, the use of low environmental impact transport and a significant reduction in packaging and waste. Bidders were encouraged to favour low environmental impact packaging, including reusable, refillable or biodegradable products. One requirement is for contractors to shift from using plastic to reusable dishes which will result in an estimated reduction of 157 tonnes/year of plastic waste due to the number of meals served annually in Turin's schools.¹²

Some ideas for improvement

Recommendations are aimed at two different situations: administrations which have retained their catering services and those who outsource them.

In-house catering

Copenhagen buys whole fruit and vegetables (i.e. not pre-prepared) and even buys the whole pig/cow. The chefs then prepare the food and use all parts.

A community scheme in Mouans Sartoux in France grows food locally before donating it to the school to be used in school meals. Powys, in Wales, has a similar community gardening scheme where food is donated to the local school and hospital.

Pupils at Peasenhall Primary School in Suffolk (UK) reared pigs before sending them to the butchers to be made into sausages. Reddish Vale Technology College in Stockport has had a farm since 1986, with pupils responsible for looking after the animals and crops. The farm is used in science and maths lessons as well as giving the children the opportunity to focus on key issues in the modern food industry, such as where food comes from, animal welfare, poor diet and waste.

At Oval primary school in Birmingham (UK), all school meals are freshly prepared and include organic and/or seasonal produce, some of which is grown in the school allotment. All pupils are involved in planting, harvesting and maintaining the allotment and surplus organic produce grown on site is sold to parents.

Outsourced catering

Giving quality a higher weighting when awarding tenders. The City of Barcelona awarded 10 out of 20 points to environmental quality aspects in its recent tender for catering in kindergartens, while

Gloucestershire uses a weighting of 60% quality and 40% price, and specifies that bidders must provide a sustainability plan.

Within its catering contract award, the Belgian City of Ghent awards 30% of points to quality, taste and shelf-life, 25% on price, 15% on menu choices (seasonal) and portions (food waste), 20% on order and delivery services and packaging (food waste, reusable/recycling), and 10 % on sustainability (people and planet)

In Turin, early market engagement activities helped inform suppliers of the environmental requirements in upcoming tenders as well as allowing city officials to understand what was available on the market in terms of eco-innovative solutions.

Include clear performance indicators and reporting requirements for sustainability within catering contracts.

Barcelona included specifications for a training programme and schedule to be implemented for staff in its catering contract. Regarding environmental aspects, the training must include information about waste minimisation, selective waste collection, the environmental characteristics of food products and low environmental impact cleaning procedures and products used in the contract

Penalties for non-compliance or awards for higher performance within contracts can help overcome greenwashing and encourage a shift to greater sustainability.

A selection of relevant tools and resources

Bristol Good Food Plan

The UK government has released a balanced scorecard which provides a method for public authorities in Britain to assess criteria such as sustainable production, resource efficiency and social-economic value as well as cost.

The School Farms network provides a database of school farms in the UK.

11.) Gloucestershire County Council School Meals Specification:

Tender Specification for the Provision of Schools Catering Services to Gloucestershire County Council

12.) See the European Commission's case study on the Turin catering service:

http://ec.europa.eu/environment/gpp/pdf/news_alert/1s-sue47_Case_Study100_Turin.pdf (27.07.2015)

2.4 CATERING'S CARBON FOOTPRINT

Counting energy consumption purely in terms of food miles risks being a very narrow approach to measuring the sustainability of a catering service. Cities such as Turin (Italy) and Helsinki (Finland) have monitored the carbon footprint of their public catering services in order to establish an effective baseline to measure improvement. A study into the carbon output of school catering services in Helsinki found that logistics accounted for just one percent of the overall carbon footprint. It is important to take a more holistic approach, considering not just the distance travelled but also energy used by farm vehicles and other equipment, feedstock, fertilisers, hothouses and processing plants.

In Turin, a life-cycle assessment approach was taken to measure the carbon footprint of five of the most commonly consumed food products (potatoes, carrots, apples, pears and peaches). In these five supply chains, the production processes accounted for between 50% and 75% of the total carbon footprint, revealing the significance of agricultural practices. In fact, during the school year 2013/2014 for these five products only, the requirement to provide food from integrated and organic production resulted in a reduction of 66.1 t CO₂ equivalent (approximately -26% of the carbon footprint of the whole supply chain of these five products) compared with providing the same amount of food from conventional agricultural systems. The transportation of these five foods, from the farm gate to the table, accounted for between 25% and 50% of the carbon footprint and, interestingly, emissions from the site of production to the city hubs were in all five cases less than 10% of the carbon footprint. On the other hand urban transportation was found to range from 20% to 40% of the carbon footprint.

An analysis of the carbon footprint of food procurement, food production and internal logistics of the catering service for schools, kindergartens and old people's homes in Helsinki pointed to slightly different conclusions. Although it was difficult to define an "average" meal for the catering services, the carbon

footprint per meal was calculated at 1.1kg CO₂ emissions. As with Turin, food purchasing and ingredients were responsible for the largest proportion of the carbon footprint (58%). Of this, 35% came from meat and 46% from dairy products. Direct energy consumption accounted for 41% of the carbon footprint. Logistics accounted for a much smaller proportion of overall emissions: only 1% of the whole.

The difference here can be explained by what was included and excluded in the two measurements. The five product groups chosen in Turin were all plant-based, whereas Helsinki measured the carbon footprint of the average meal. As fruits and vegetables have a smaller carbon footprint overall, the percentage of emissions coming from transportation in these food groups would normally be higher.¹³ Meat and dairy made up 81% of all emissions for the average meal in the Helsinki calculation, showing what a significant impact they have.

Turin's results show that, although responsible for less emissions than meat and dairy consumption, transportation and logistics is nonetheless an important consideration.



collecting potatoes" (Stock photo) by Ridofranz

Some ideas for improvement

Investing in baselining the carbon footprint of the catering service, as in Turin and Helsinki, provides a clear indicator of which areas a city should focus on for maximum impact.

Increasing the amount of organic food can have a large impact on CO₂ emissions during the production process.

Copenhagen (Denmark) and Barcelona (Spain) increased the share of organic food purchased for school meals without significantly reducing supplier interest by awarding points for the number and variety of organic produce offered.

A selection of relevant tools and resources

These two case studies published by the European Commission demonstrate the approach used by Helsinki and Turin to measuring their carbon footprint.

The CCalc carbon footprinting tool allows users to calculate the carbon, water and other footprints of a variety of industrial processes.

13.) 2007 research by the Öko-Institut suggests that on average transport makes up 3% of food's carbon footprint, whereas if vegetables are assessed alone this figure changes to 15%:
<http://www.oeko.de/oekodoc/328/2007-011-de.pdf> (27.07.2015)

2.5 THE PROBLEM WITH KITCHENS

The Mikkeli University of Applied Sciences (Mamk) has undertaken a study of electricity and water consumption data in professional kitchens as part of the Eco-Efficient Professional Kitchen project. The outcomes of this study provide some interesting information for school kitchens, giving insights on which areas consume the most electricity and water. According to their research, 65% of energy consumed in Finnish professional kitchens is used for heating, making this by far the largest area of consumption. A further 26% of energy usage is on cooking, cold storage and dishwashing, with ventilation and lighting making up the rest.¹⁴

The purchase of energy efficient appliances and white goods can have an important effect on energy use within kitchens. Investing in appliances with a high energy efficiency rating may help reduce both energy and water bills. The potential for savings is clearly demonstrated by a tender published by the German Central Procurement Agency BeschA, who halved water usage by purchasing a very efficient commercial dishwasher. It is also possible to specify within the tender that low environmental impact cleaning products are used within the kitchens, whether they are owned by the schools, the Council or the catering company. The use of low environmental impact cleaning products was specified in recent catering tenders published by Copenhagen, Rome and Barcelona.

Many cities have established systems whereby food is prepared remotely in large, industrial style kitchens and delivered to schools, often in plastic containers. This has led to a reduction in the number of functioning kitchens on school premises, as the job of schools has moved from preparing the meals from scratch towards assembling them. The move towards larger kitchens is intended to create economies of scale, but often savings achieved are wiped out by the more complex logistics involved. Broader impacts include lower quality food, both nutritionally and in terms of freshness; more

road miles as food is produced, processed and served in separate locations; a decrease in job opportunities as jobs for experienced cooks are replaced by unskilled labour; a reliance on pre-packaged and processed foods; and less control over the food procurement process for those responsible for the catering contracts.

One of the difficulties associated with centralised kitchens is the cost of keeping food at an appropriate temperature while delivering it to schools across the municipality. One approach gaining popularity is known as the “cook & chill” method. The advantages of this method are open for debate. It is very popular with kitchen staff and caterers as it allows food to be prepared and portioned in advance and kept refrigerated for up to four days. It maintains a high level of freshness and simply requires reheating once it is time to serve. However the lower energy requirements at (point of sale) mask the energy intensive process of initial preparation and heating of the food and the non-stop cooling that is needed to keep it at a stable temperature before it reaches the school canteen.

Ongoing budget cuts in many EU countries render it very difficult to bring kitchens back into schools, as this would require a large up-front investment in terms of infrastructure, equipment and staff costs which may not be financially feasible. In many inner city schools, there is also a problem of space. Even if it were affordable to build kitchens, there is nowhere for them to go.

There are nonetheless examples of this trend beginning to be reversed. Funding from a German investment programme to convert traditional morning schools into day schools (IZBB – Investition Zukunft Bildung und Betreuung) was also used to build some new kitchens, new eating rooms and new teaching kitchens.¹⁵ Kitchens have also been brought back into schools in Nice (France), Lincolnshire (UK) and Malmo (Sweden). In Denmark, new schools are once again beginning to be constructed with kitchens.

Some ideas for improvement

In Malmö, the number of kitchens in schools had dropped to just eight. This was seen to be affecting the quality of the food, however, and the number of kitchens has slowly begun to creep back upwards. There are now 27 in-school kitchens in the city.

It is possible to specify use of A++ appliances and ecological cleaning products, as has been done in Copenhagen, Rome and Barcelona, within technical specifications, whether or not the authority owns the kitchen in which food is being prepared.

Barcelona included specifications for a training programme and schedule to be implemented for staff in its catering contract. Regarding environmental aspects, the training must include information about waste minimisation, selective waste collection, the environmental characteristics of food products and low environmental impact cleaning procedures and products used in the contract.

Applying life cycle costing methodology when purchasing new appliances allows for a consideration of the broader costs which are not necessarily obvious at the point of purchase.

In Turin, additional criteria were used including ecological cleaning products to lessen sustainability impacts not associated with food.

Including training in the tender specifications ensures that staff know how to use the appliances in the most energy efficient way.

A selection of relevant tools and resources

This [GPP 2020 tender model](#) for purchase of an energy efficient commercial dishwasher shows the impressive savings that can be made by applying a life cycle costing methodology

This [case study](#) from the European Commission from the City of Luxembourg is a good example of a tender for ecological cleaning products.

The [topten.eu](#) website allows for comparison of energy efficient fridges and freezers. There are also national websites available.

The U.S. General Services Administration's [sustainable facilities tool](#) provides advice on life cycle costing and guiding principles for buying more efficient catering equipment. Although the regulations differ in the USA and Europe, this tool is a good aid for identifying the potential problem areas within various types of catering equipment.

New technologies such as this [delivery van](#) which uses to liquid carbon dioxide to keep food cool are being developed to reduce the environmental impact of refrigerating food.

The Finnish resource [Energy Efficient Professional Kitchen](#) provides a lot of useful information on how to improve energy efficiency during food preparation.

14.) More information on this study can be found on the project website: http://www.mamk.fi/tutkimus_ja_kehitys/kestava_hyvinvointi/kaynnissa_olevat_hankkeet/ekotehokas_ammattikeittio/project_summary_in_english (27.07.2015)

15.) More information on the Ganztagschule funding programme is available in the report: http://www.ganztagschulen.org/_media/gut_angelegt.pdf (27.07.2015)

2.6 NUTRITIONAL VALUE AND QUALITY

Closely linked to the issue of price is a broader debate about the quality and nutritional value of food being served in schools. Nutritional value is a crucial question when considering the welfare of pupils and also has environmental consequences with regard to food production, manufacture and consumption.

A narrow focus on lowest price as tender criteria can often lead to poor quality food, frequently produced using chemical-based agricultural methods which have both environmental and social impacts. These include depletion in soil quality and increased levels of water pollution due to over-use of pesticides and fertilisers, a dramatic decline in crop varieties due to increasing monoculture within industrial farming and a significant loss of biodiversity¹⁶. This decrease in soil quality is one of the factors which returns food with lower nutritional benefits.

Fossil fuel use is also amplified by intensive farming. Research conducted by Cornell University in the 1990s found that more than 100 billion gallons of oil was used on food production each year in the USA. This gives a good indicator of the intense fossil fuel consumption required to prop up the increasingly mechanised farming industry.

Nutrition is closely linked to freshness. Bulk buying of cheap, pre-prepared products (such as frozen chips or pre-chopped vegetables) makes economic sense for schools that need to provide meals to hundreds of pupils at one time. However, there is evidence to suggest that the nutritional quality of fresh produce falls after three days, meaning that food which is not fresh does not contain as many vitamins and minerals as food that has just been harvested. Pre-prepared food often contains a higher level of preservatives, such as salt, in order to keep it fresh and tasting good. A focus on preparing food from scratch using raw, unprocessed ingredients allows catering staff more control over what goes into meals, making it easier to provide a balanced and nutritious plate.

Some ideas for improvement

The City of Rome (Italy) included 'guaranteed freshness' in its award criteria to ensure a maximum of three days between harvesting and consumption.¹⁷

Rome also introduced the concept of 'bio-dedicated food chains' into its catering tender. As part of a bio-dedicated food chain the amount of toxins released is greatly reduced as it is ensured that chemical pesticides are not used at any stage in the food chain.¹⁸

Buying seasonally can often help keep costs down whilst ensuring that food is consumed at its freshest, with minimal intervention in the production process.¹⁹

In Copenhagen (Denmark) and Mont Duplan à Nîmes (France), a panel of chefs tests the food for taste and nutritional quality as part of the award phase.

A selection of relevant tools and resources

Online databases in France, Finland and Germany link purchasers directly to growers

Malmö Policy for sustainable development and food

The Hospital Food Standards Panel's report on standards for food and drink in NHS hospitals (UK)



"Silage Collecting" (Stock photo) by stephenmeese

2.7 SOCIAL ASPECTS OF SCHOOL FOOD

School meals play an important role within the broader community. Food preparation and production have traditionally provided skilled part-time jobs within schools and been seen as a tool to help promote local agriculture. The outsourcing of catering contracts and removal of functioning school kitchens has had a significant impact on the skills level of the jobs available. Whereas previously schools required trained cooks to prepare and serve school meals, the roles now available tend more towards assembling food which has been prepared elsewhere. This has a negative impact both on pay and levels of job satisfaction.

Furthermore, the size of catering contracts and the lack of onsite facilities can help to exclude smaller producers from the market, as they are unable to provide the all-inclusive catering service which councils are now requesting. Many communities have a valid desire to support their local economy, but feel that this

is not possible under procurement rules which forbid preferential treatment for local or national products. This feeling is inconsistent with much that can be done within the spirit of the Procurement Directives to promote SMEs and create skilled jobs locally.

National legislation, such as the Public Services (Social Value) Act in the UK can be helpful in providing clarity. The Public Services Act, for example, requires public authorities to consider economic, social and environmental well-being in connection with public services contracts. The authority must consider firstly how what is being procured might improve the economic, social and environmental well-being of the relevant area as well as how, in conducting the process of procurement, it might act with a view to securing that improvement.

Schemes that focus on food quality and nutrition, such as the Organic Kitchen project in Copenhagen, increase the status of school

16.) See EU GPP criteria for food and catering: http://ec.europa.eu/environment/gpp/pdf/toolkit/food_GPP_background_report.pdf (27.07.2015)
 17.) See Sonnino, R. (2009) *Quality Food, Public Procurement and Sustainable Development: The School Meal Revolution in Rome*.
 18.) See Sonnino, R. (2009) *Quality Food, Public Procurement and Sustainable Development: The School Meal Revolution in Rome*.
 19.) For a definition of seasonal products, see EU GPP criteria for food and catering.

cooks and give them greater pride in their work. Other minor changes, such as dividing tenders up into more manageable lots, committing to buying fresh, seasonal and organic produce, and engaging with suppliers throughout the process can encourage smaller companies to bid.

Schools are an ideal place to educate pupils on the longer term environmental impacts of their food choices, overcoming the disconnect which is often associated with limited understanding of where their food comes from. Organic school gardens and awareness raising projects can incorporate life skills such as cooking and gardening into practical carbon reduction schemes.

Beyond budgetary considerations, parental wishes are very important when it comes to setting food policy both locally and at a national level. In many cities, the school catering services present an opportunity to educate children on sustainability policies. The Turin school system, for example includes about 71,500 children from 0-13 years of age. Taking into consideration the teachers and families of these children, between 230-250,000 citizens are affected by the school catering services.

Parents tend to concentrate on healthy, nutritious food for their children at an affordable price. Purchasing organic food tends to receive a good deal of support from parents, (pressure groups) and national governments. Other aspects of sustainability such as energy saving and waste reduction tend to be secondary concerns at best. Their benefits are less tangible in terms of children's wellbeing and therefore less convincing in winning support of parents.

Reducing food miles also has popular support, as it tends to ensure fresher food and correlates with boosting the local economy. A UK study in 2005 determined that the average food item travels around 5,000 miles (8,000 km) from farm to plate, a heavy investment in terms of (fossil) fuel. Procurers must be careful when approaching this as a focus on local food goes against EU principles of open competition.

Some ideas for improvement

Dividing a tender into smaller lots, as in East Ayrshire (UK), can increase flexibility within catering contracts and encourage small and medium-sized enterprises to bid.

In Copenhagen (Denmark), there has been an explicit effort to hire chefs and not just people to "assemble" food

There are a number of education and awareness raising projects and initiatives taking place in schools across Europe – these include organic gardens, [Climate Lunch](#) campaigns, etc.

Working with local politicians and lawmakers can help bring about long term change. The City of Turin is planning to introduce a local decree which would ensure all future procurement activities are carried out using sustainable criteria.

A selection of relevant tools and resources

The [school food matters website](#) campaigns for better quality ingredients, school kitchens that can produce fresh food on site, more training and paid hours for catering staff and better canteens in UK schools.

The [GIY \(Grow it Yourself\)](#), [The Living Classroom](#) educates children on school gardens, providing seasonal gardening tips and videos on how to plant and grow various fruit and vegetables.



"Magnifying glass on green car" (dreamstime.com) by Fuzzbones

2.8 LOGISTICS - DELIVERIES

Whilst the impact of logistics may make less of a contribution to carbon footprint measurements than other aspects such as food production, it is nonetheless a highly visible indicator of a city's commitment to sustainable catering.

Deliveries can also have a large effect on the local environment, as emissions such as NOx and particulate matter (PM) which are not measured as part of a carbon footprinting exercise can have a large impact on people's health and wellbeing. Congestion and local air pollution are increasingly important considerations for public authorities across Europe. In 2014, air pollution levels were consistently above legal limits forcing cities such as Paris (France) to implement emergency measures. The use of energy efficient hybrids and electric vehicles can have a significant impact locally, while cutting down the number of journeys required from farm to plate is also an important step in reducing fuel consumption.

Ghent (Belgium) specified in its last catering tender that energy efficient, hybrid vehicles should be used in the transportation of food. This sends a clear message that energy efficiency and emissions reduction is important to the city.

Some ideas for improvement

The City of Ghent (Belgium) has specified energy efficient, hybrid vehicles be used in transportation of food.

In Copenhagen (Denmark), a local law prevents vehicles from idling with the engine on for more than a minute.

Investigate the possibility of combining different routes or deliveries. In Växjö (Sweden), the use of a central consolidation centre for various products (including food) has cut local transport emissions by 95%.

Ecodriving education for drivers can help reduce fuel consumption.

A selection of relevant tools and resources

Foodlogica uses electronic tricycles to deliver food around Amsterdam city centre, thus cutting down on air pollution within the city.

The [EcoDrive website](#) provides information on driving in a more environmentally sustainable manner.

2.9 CANTEENS

The most visible part of the catering chain is within the school canteens themselves. Over-sized portions, unhealthy options and disposable crockery and cutlery can lead to a disposable food culture which has ramifications beyond the confines of school meals.

Many local authorities have invested in decorating canteens to encourage a positive atmosphere where children can sit down and take time to enjoy and properly digest their food. Sourcing crockery and cutlery that can be washed and reused rather than disposable plastic and polystyrene implements both adds to the positive atmosphere and reduces negative environmental impacts.

Other projects include educational and awareness campaigns, with posters explaining where food is procured and separating tables which force pupils to consider what waste they are producing and where it will go.



Some ideas for improvement

Invest in reusable crockery and cutlery

Ensure packaging is biodegradable and/or recyclable

In the City of Turin (Italy), the purchase of reusable hard plastic trays with sections for different foods cut down on waste from disposable plates.

Separating tables in the canteen ensure children get involved with recycling and waste reduction.

A selection of relevant tools and resources

Jamie's Food Revolution toolkits provide advice on everything from introducing salad bars in canteens to creating school gardens.

The [Slow Food in the canteen report](#) looks at improving food culture for European children.

This [School Food Standards Guide](#) provides a series of posters which can be printed and displayed on portion sizes, food groups and preparation techniques.

2.10 FOOD WASTE AND PACKAGING

The [Foodspill project](#), carried out by MTT Agrifood Research Finland in 2012, measured the breakdown and levels of food waste in different businesses and canteens across Finland. They found that in schools, approximately 18% of food is unnecessarily wasted. The majority of preventable food waste (11%) occurs during service. This is largely as a result of too much being prepared in the kitchen which is then leftover after the pupils have been served.

Leftovers due to portion sizes made a significant contribution (5%), and a smaller level (2%) could also be found at point of preparation.²⁰

In some countries, such as France and Italy, a meal with several courses forms an important part of cultural heritage. In France, for example, a national law specifies that five components must be offered for each meal. This can lead to a lot of wastage as pupils struggle to finish the full meal.

Schools in the UK noted that guidelines recommending hot food can be held below 63 degrees °C for no longer than 2 hours and cold food can be held above 5 degrees °C for no longer than 4 hours leads to much good food being thrown away. Some schools have begun to record how much food is thrown away on arrival, in order to discover the impact of this measure.

There may also be an economic incentive to create waste as caterers are encouraged to provide a wide range of choices to persuade more children into the canteen. The relative cost of meals wasted may not be as important economically as the profit gained.

A number of measures have been introduced to tackle the food waste problem. Tenders often include criteria related to monitoring of waste levels and awareness-raising campaigns. Some councils ask suppliers to ensure that waste oil is recycled as biofuel and amounts purchased are readjusted according to what is used and what is thrown away over certain periods. Systems where meals are chosen in advance cut down on waste by eliminating the need for extra options in the canteen, and give suppliers advance warning of what is needed.

Some ideas for improvement

In Gloucestershire (UK), school meals are pre-ordered by 10.30am to reduce wastage.

The use of sorting tables in (France) involves children actively in recycling and brings them face to face with levels of food waste.

The municipality of Kiruna (Sweden) removed the trays in schools and reduced food waste by 50 percent. Removal of the trays resulted in smaller portions for the students and thus less food waste.

Switching to clear plastic bags and bins for

collecting food waste in both the kitchen and canteen has been seen to have an impressive impact on reducing waste during preparation and consumption.

Offering two sizes of plates, or even portion sizes as done by the [University of Freiburg](#), to allow for smaller portion sizes.

The [Green Cook](#) initiative encouraged schools in France to monitoring what is most wasted in the school canteen and cut down on it (e.g. bread).

At a number of schools in Germany, pupils choose what meal they are planning to eat the day before it is served and any absences are inserted before a certain time in the morning to allow food orders and deliveries to better reflect the amounts required. This both provides more flexibility and ensures less food wastage.

In the City of Rome, unused foods are given to charity associations and leftovers to animal shelters to ensure excess food is not wasted. Similar schemes also exist in Helsinki, and Turin.

A selection of relevant tools and resources

FoodService Europe – [Food waste reduction case studies](#)

Report – [Prevention of food waste in restaurants, hotels, canteens and catering](#)

Report – [Food waste volume and composition in the Finnish Supply Chain](#)

This Swedish [food waste tracker](#) weighs food as it is thrown away and brings pupils face to face with their waste levels.

The [Food recovery hierarchy](#) provides suggestions for diverting foodwaste from landfill.

A [company in Paris](#) has been set up to collect food waste and turn it into biogas.

20.) *Food Waste Volume and Composition in the Finnish Supply Chain: Special Focus on Food Service Sector*: <https://portal.mtt.fi/portal/page/portal/mtt/hankkeet/foodspill/Food%20Waste%20Volume%20and%20Composition%20Focus%20on%20Food%20Service%20Sector.pdf> (27.07.2015)

Examples of good practice

3.1

A SMART APPROACH TO PUBLIC FOOD IN MALMÖ (SWEDEN)

School meals in Sweden are provided free of charge to all children. This leads to very high levels of uptake, with almost 90% of pupils in Malmö eating in school canteens. Menus are planned centrally for all schools. The food is procured and cooked in 25 government-owned kitchens before being distributed around the city. In total, 40,000 school meals are served in Malmö each day and €15 million is spent on food from the wholesale provider each year. Levels of spend are high enough, and competition on the market strong enough to drive the market towards offering better value, sustainable products.

A policy for sustainability

The City of Malmö's Policy for Sustainable Development and Food has been in place since October 2010 and forms part of a broader drive to achieve 100% sustainable purchasing by 2020. One of the key goals outlined in this document is a 40% reduction of food-related greenhouse gases by 2020, compared to 2002 levels. It also states that by 2020 all food served by the City of Malmö shall be 100% organic.

Adhesion to the food policy is reinforced by awards given internally to purchasers who are proactively using the procurement mechanisms available to select sustainable food for their organisation.

The SMART way forward

Eat S.M.A.R.T. is a model developed by the Institute for Public Health in Stockholm. It includes five main recommendations: reducing meat consumption; minimising empty calories; increasing the amount of organic produce; carefully choosing the right sort of meat and vegetables from an environmental and health perspective; and increasing transport efficiency. Malmö has adopted this approach in its food policy and is working on implementing it in the city's procurement activities.

Emissions reduction

One of the biggest contributors to greenhouse gas emissions is meat production, especially red meat. Malmö has taken a holistic approach to school menus, not just by introducing vegetarian options but also by reducing the amount of meat used in meals and swapping out meats with a high carbon footprint (such as beef) for less polluting alternatives (such as chicken).

Vegetarian-only menus have also been introduced each week, which not only broadens the types of foods more traditional meat-eaters get to try but also raises awareness of the link between pollution and their plate.

Malmö has managed to achieve a 5% reduction in emissions so far and is actively looking into the carbon footprint of other aspects of the food supply chain. This is carried out using a tool developed by the Swedish Institute of Biotechnology for internal monitoring of CO₂ emissions. There is also guidance in the web based purchasing system, which marks environmentally friendly products with a green dot to indicate to devolved buyers which are the greenest options. Statistical analysis is then used to see what percentage of these products have been purchased from the city's food contract.

Put your money where your mouth is

By selecting organic varieties in place of conventional food products, Malmö has been successful in using its purchasing power to drive down the price of organic food. This has been particularly successful when it comes to purchasing organic milk. In 2014, 44 % of food purchased by the city was organic and this proportion continues to rise.



"Malmö Live" (photo on Flickr) by Maria Ekilind, licensed under CC BY-SA 2.0

3.2

MEASURING CARBON DIOXIDE EMISSIONS IN TURIN (ITALY)

School catering represents a significant part of the procurement budget for the City of Turin. On average 8 million meals are delivered each year, with an annual cost of approximately 40 million EUR. The school catering services present an opportunity to educate children on sustainability policies, as the Turin school system (kindergarten and primary schools) includes approximately 71,500 children aged 0-13 years. Taking into consideration the teachers and families of these children, between 230-250,000 citizens are affected by the school catering services.

The current contract

The current school catering service contract began in September 2013 and will run until August 2016 with the possibility of extension for a further two years. It contains a number of measures aimed at making the catering service more sustainable. These include the purchase of energy efficient appliances for schools, use of tap water, transportation using vehicles with a low environmental impact and a significant reduction in packaging and waste.

Additional criteria used to lessen other sustainability impacts associated with the catering contract include requiring the use of ecological cleaning products and awarding points for bidders offering a wider range of organic or fair trade products than were specifically requested.

A targeted approach

The City of Turin wanted to gain a better understanding of what levels of greenhouse gas emissions (GHG) were produced at different stages of the food procurement process in order to build on its current sustainability measures with targeted efforts in future contracts. A detailed study was therefore commissioned from the University of Turin to look into the carbon footprint of the catering system in more depth.

As emissions vary greatly between different products, the university chose to focus on five of

the most commonly consumed foods (potatoes, carrots, apples, pears and peaches). They also narrowed their analysis to measure just carbon dioxide emissions in the first instance, in order to avoid over-complication.

A clear difference

A life-cycle assessment analysis was used to see how much CO₂ was produced for each food product at different stages of the supply chain. Production processes accounted for between 50% and 75% of the total carbon footprint of these five products, revealing the significance of agricultural practices. In fact, during the school year 2013/2014, the requirement to provide food from integrated and organic production resulted in a reduction of 66.1 t CO₂ equivalent (approximately -26% of the carbon footprint of the whole supply chain of these five products) compared with providing the same amount of food from conventional agricultural systems.

Transportation of these five foods from the farm gate to the table accounted for between 25% and 50% of the carbon footprint and, interestingly, emissions from the site of production to the city hubs were in all five cases less than 10% of the carbon footprint. On the other hand, urban transportation accounted for between 20% and 40% of the carbon footprint.

What next?

These results showed that, in the case of Turin, production practices and urban transportation are two parts of the supply chain where there is a good deal of potential for significant reductions in GHG emissions. The city is using these results to put together official guidelines for eco-innovative procurement of school catering service in Turin, which will be adopted by the local government and used in future procurement contracts.



View of Turin with Torre Littoria and snowcapped Alps* (dreamstime) by Piero Cruciatto

3.3

PURCHASING HIGH QUALITY, LOW CARBON FOOD IN COPENHAGEN (DENMARK)

The Municipality of Copenhagen provides approximately 20,000 meals each day to nursing homes, elderly homes, schools, day-care centres and homes for people with intellectual disabilities. The food is prepared in 80 large city-owned kitchens before being distributed to different establishments around the city. Copenhagen has ambitious sustainability plans and has been working with the Copenhagen House of Food, an independent, non-commercial foundation established by the City of Copenhagen in 2007, to create a healthy, happy and sustainable public food culture.

In 2013, the Municipality of Copenhagen published a public tender for a framework contract to procure 100% organic, seasonal fruit and vegetables. These were required to be certified and labelled as organic on the packaging or label, with suppliers that made it through the first round asked to provide samples of their produce to be tested for quality and taste.

Balancing the budget

In order to manage costs, an excel tool known as the Food Basket was developed to help balance costs for the different types of food purchased. For example, by reducing the amount of meat and increasing the amount of vegetables bought, the organic tender was rendered no more expensive than a tender for non-organic food.

Beyond organic

Technical specifications included requirements to minimise packaging and ensure that it was recyclable. Suppliers were obliged to help protect the environment by using raw materials and vehicles which resulted in the least possible environmental pollution and impact.

In addition, a number of criteria were introduced with regard to transportation. For diesel vehicles with an unladen weight of over 3,500 kg, the supplier had to demonstrate that they had achieved the necessary environmental zone

certificate to be used in the City of Copenhagen. Vehicles that weighed less than this were required to meet the Euro 5 standard for emissions. For diesel vehicles, this means that they must be fitted with a particulate filter.

Suppliers were required to state in their offer what types of vehicles would be used including make, model and year. They were expected to show proof that these vehicles met the standards specified in the tender. If this was not possible at the time of submitting the tender, they were asked to inform the Municipality which vehicles they intended to use if they won the contract. Additionally, suppliers were expected to record their fuel consumption throughout the contract and make it available to the Municipality on request, with appropriate justifications.

Choosing a supplier

The award criteria were divided between price (40%), quality (35%) and range of products offered (25%). In practice, this means that the Municipality awarded points according to how many different varieties of fruit and vegetables the suppliers could offer to the Municipality during a year.

This not only helped to promote biodiversity but also rewarded the use of seasonal products, as more varieties tend to be available for products which are currently in season. This can be seen with apples, of which 183 different types were offered, many of them from small and medium sized subcontractors.

Seven bidders applied for the tender, two of whom met all the tender specifications. The winning bidder supplies a wide variety of seasonal fruit and vegetables, sourced from small to medium sized subcontractors from all over Europe. The contract has been in place since August 2014 and runs for two years, with the possibility of a further two year extension.

"Nyhavn - Copenhagen" (Photo on Flickr)
by Roman Pfeiffer licensed under CC BY 2.0



3.4

PROCUREMENT OF CATERING AS A TOOL FOR BROADER SOCIAL POLICIES IN EAST AYRSHIRE (SCOTLAND)

The county of East Ayrshire has been working on improving the sustainability of its school meals since 2004, making it perhaps the earliest sustainable school food service in the United Kingdom. The area has lower levels of employment, qualifications and average earnings than the Scottish average. This difficult outlook is coupled with lower life expectancy than the national average and rising levels of obesity in school children.

The local council views these problems as interlinked and is using a joined-up approach to overcome them. School catering was identified as a cross-cutting area where the council could intervene to create positive change.²¹ East Ayrshire is responsible for 44 primary and nine secondary schools, providing approximately 1.3 million school meals each year.

The Council's Chief Executive Officer explained, "School Meals is about improving the environment and improving opportunities. We have a problem with population loss [...] so anything you can do in terms of contributing to the sustainability of the economy has a positive effect on our community and in terms of local produce that's also a contribution to the environment...we see school meals as being very cross-cutting."

Think big, start small

An initial pilot sourcing fresh, organic food for one primary school was carried out in 2004. Feedback was positive, so the pilot was extended to a further 10 primary schools. When the value of food required reached 12 schools the full EU procurement process was followed and this has been repeated on 3 occasions since. The reform was extended to 42 schools in 2008, following a successful trial period and a positive response from all stakeholders. The most recent food contracts were awarded in 2012 for 3 years with an option to extend for one year.

The Council engaged with the market through a series of open meetings explaining the broader policy aims and providing support and guidance on fulfilling the tender requirements. These meetings were a key step to encouraging small and medium-sized businesses to apply, by demonstrating that they would be able to compete against larger suppliers as the criteria being used were much broader than price.

Breaking it down

In order to encourage smaller suppliers, the contract was broken down into a number of individual lots. These covered red meat, poultry, fish, fruit, vegetables, milk, cheese, eggs, and dry, bottled and canned foodstuffs.

Award criteria were divided equally between cost and quality considerations, which were further divided into four main criteria. Suppliers were rewarded for their ability to minimise the timescale between harvest and delivery, ensuring that freshness was encouraged. A criterion addressing quality and range of foodstuffs covered fair trade and seasonality of products as well as special dietary requirements. Social issues such as training opportunities for staff, membership of food associations and issues of equality were addressed in the third criterion, which looked at quality and range of foodstuffs. Finally, an analysis of use of resources rewarded proposals for broader reductions in environmental impacts through minimising waste and packaging, increasing recycling and composting, and higher than average animal welfare standards.

An impressive impact

Independent studies carried out by the Scottish Environment Protection Agency showed an impressive reduction in carbon emissions, with CO₂ savings from just one school measured at 37.7 tonnes per annum. The effect on the local economy was equally impressive, with an estimated social return of £6 (approximately €9) for every £1 spent in the form of



employment, environmental, health and social benefits. Furthermore, the use of smaller product lists per individual supplier delivered higher quality, consistency and reliability. The East Ayrshire model has had a significant

long-term impact, even influencing food policy at the national level in Scotland.

21.) *Escaping the Local Trap: Insights on Re-localization from School Food Reform*, Roberta Sonnino, *Journal of Environmental Policy and Planning*, Volume 12, Issue 1, 2010, pp. 23-40

Conclusion

This report is intended to show that many of the difficulties faced in the procurement of sustainable catering services can be overcome with imaginative approaches and often in a way that minimises, or often reduces, financial outlay. Furthermore, procuring more sustainable catering services for your school is perfectly possible and legal within the current EU legal framework. The updated Procurement Directives encourage the use of most economically advantageous tender (MEAT) criteria when awarding public tenders, meaning that public authorities have a clear mandate to look beyond cost and include externalities such as quality and sustainability when choosing catering services and food suppliers.

Despite the perception that sustainable goods and services cost more and that sustainable catering can only be attained by schools with a healthy cash flow, tight budgets do not have to be a block to sustainability. What is important, however, is a supportive local and political framework. The support and good-will of parents, families, governors and local politicians is an important foundation for the success of any school catering service. As with any change, it is important to accompany any modifications to procurement policy with education and awareness raising activities in order to ensure the successful uptake of the new eco-innovative solution. This is equally true for staff, pupils, and the wider local community.

An important finding from the carbon footprint studies carried out in Turin and Helsinki is that buying local food does not necessarily equate to buying sustainably. As demonstrated by the Municipality of Copenhagen, freshness, seasonality and organic provenance can all be useful approaches to take. These criteria allow procurers to purchase the most sustainable produce available while adhering to the EU principles of equal treatment, non-discrimination, and mutual recognition, giving equal validity to qualifications and standards from all EU Member States, where appropriate.

A final lesson to be drawn from this report is that that change does not need to be on a grand scale – an incremental approach to eco-innovation is often a very effective way of successfully introducing a culture of sustainability while maintaining the support of key stakeholders.

By highlighting ideas and best practice cases from around Europe, this report has attempted to provide ideas, inspiration and further resources for those who are involved in the procurement of food and catering services for schools.

We are always interested to hear about your good ideas and experiences in sustainable school catering. Please share these with us so that we can share them with others:

procurement@iclei.org

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Inventory of resources

NAME	SUMMARY	LINK	KEYWORDS
GPP criteria for catering services	GPP criteria covering food, food waste, energy and water, logistics and packaging	http://motivanhankintapalvelu.fi/tietopankki/ruokapalvelut/ymparistokriteerit.html	Finland GPP criteria Food waste
Nordic Swan criteria for hotels, restaurants and conference facilities (in Finnish, Swedish and English)	The main criteria for eco-labelling of hotels, restaurants and conference facilities are criteria related to energy, chemicals and water consumption, and to minimise waste. For restaurants there are also main criteria for serving of food	http://www.nordic-ecolabel.org/portals/hotels-restaurants-and-conference-facilities/criteria/	Finland Sweden Nordic Swan Food waste GPP criteria
Energy efficient professional kitchen – guide (in Finnish)	Guide for professional kitchens to take improve energy efficiency through working habits, preparation, storage and cleaning processes and use of energy efficient appliances in kitchens.	http://www.motiva.fi/julkaisut/kiinteisto_ja_palveluala/energiatehokas_ammattikeitto.1037.shtml	Finland Energy efficiency Guidance
Alimentation.gouv	French list of regional online databases, linking purchasers directly to growers.	http://alimentation.gouv.fr/les-autres-plateformes	France Organic Supply chain
Proposer des produits locaux et de Qualité en Restauration Collective, Ils le Font – Recueil d’expérience en Languedoc-Rousillon	Case studies from schools in the Languedoc-Rousillon region on waste reduction and increase in organic food including advice on procurement activities	http://en.calameo.com/read/003638204f772c5b638c3	France Organic Food waste Case studies
Pacte nationale de lutte contre le gaspillage alimentaire	A voluntary agreement proposed by the French government, inviting organisations to take steps towards reducing their food waste.	http://alimentation.gouv.fr/IMG/pdf/250913-Pacte-gaspillageAlim_cle4da639.pdf	France Food waste Policy
Irish EPA GPP Criteria – Food & Catering	An overview of the issues at stake with regard to sustainable public procurement, best practice examples and detailed criteria for insertion in tenders	http://greenbusiness.ie/wp-content/uploads/2014/09/GreenProcurementGuidanceforPublicSector-web.pdf	Ireland GPP Criteria
Food waste monitoring report (Wageningen University)	A mid-term report cataloguing food waste levels in the Netherlands between 2009 and 2011, with a view to putting forward recommendations for further waste reduction activities.	http://www.nowastenetwork.nl/wp-content/uploads/Food_waste_monitor_ENG_Dec_2013.pdf	Food waste Netherlands
Svinn i livsmedelskedjan	Identification of key problems and advice for reducing waste, improving monitoring etc	http://www.naturvardsverket.se/Documents/publikationer/978-91-620-5885-2.pdf	Food waste

NAME	SUMMARY	LINK	KEYWORDS
Revaluing Public Sector Food Procurement in Europe: An Action Plan for Sustainability	An Action Plan to help and encourage urban governments to take up the challenge of more sustainable purchasing practices.	http://www.foodlinkscommunity.net/fileadmin/documents_organicresearch/foodlinks/publications/Foodlinks_report_low.pdf	Europe Tools Guidance
EU GPP Criteria for food	Recommendations for the purchase of sustainable food and catering services. Covers: fruit and vegetables; aquaculture, marine, meat and dairy products; and drinks and beverages; as well as the performance of relevant catering services.	http://ec.europa.eu/environment/gpp/pdf/toolkit/food_GPP_product_sheet.pdf	Europe GPP Criteria
Sustainable catering guide for universities	A short introductory guide designed to provide caterers and event staff with environmental sustainability guidelines for event catering practices.	http://fsd.monash.edu.au/files/MU%20Sustainable%20Catering%20Guide%20On%20Screen_1.pdf	General Food waste Organic Energy efficiency
Prevention of food waste in restaurants, hotels, canteens and catering	A brief report on what new initiatives are available to reduce the generation of avoidable food waste from restaurants, hotels, canteens and catering.	http://infohouse.p2ric.org/ref/54/53132.pdf	General Food waste
FAO toolkit: Reducing food wastage footprint	The aim of the Toolkit is to showcase concrete good practice examples of waste reduction, while pointing to information sources, guidelines and pledges in favour of food waste reduction.	http://www.fao.org/docrep/018/i3342e/i3342e.pdf	General Food waste Tools
Environmental Passport for Food	A guide to the requirements for obtaining and content of the Finnish Environmental Passport, a certification to show knowledge of sustainable practices in the kitchen.	http://www.laatuketju.fi/laatu-keiju/www/fi/hankkeet/2011/tiivistelmat/Ympristpassi_eng_VALMIS.pdf	Finland Tools
Steps to Organic – programme for professional kitchens	The Steps to Organic programme aims to help professional kitchens to increase their use of organic products and to encourage them to promote sustainable development in their activities. Joining is voluntary and free of charge.	http://www.portaatluomuun.fi/front_page	Finland Organic Tools
Lisää lähiruokaa julkisten keittiöiden asiakkaille - perusteluja ja ohjeita hankintoihin	More sustainable food for customers of public kitchens, arguments and guidance for including sustainability in food procurement.	http://www.ekocentria.fi/lahiruokaopas	Finland Sweden Guidance

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GPP case study – organic food Malmö	This case study covers a pilot project carried out in Malmö from 2004-2007. The project aimed to serve 100% organic food in a school restaurant which was considered to be a good model for replication.	http://ec.europa.eu/environment/gpp/pdf/casestudy4.pdf	Sweden Organic Case study
City of Malmö - Policy for sustainable development and food	The policy is designed to contribute to a sustainable Malmö with healthy citizen and work towards 100% sustainable purchasing in the City of Malmö.	http://malmo.se/download/18_d8bc6b-31373089f7d9800018573/Foodpolicy_Malmo.pdf	Sweden Policy
Plan for Public Procurement - Balance Scorecard	This provides a method for public authorities in Britain to assess criteria such as sustainable production, resource efficiency and social-economic value as well as cost.	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/337027/public-food-procurement-balance-scorecard.pdf	UK Tools GPP criteria
Healthier and more sustainable catering	Catering guidance that offers practical advice on how to make catering affordable, healthier and more sustainable.	https://www.gov.uk/government/publications/healthier-and-more-sustainable-catering-a-toolkit-for-serving-food-to-adults	UK Policy Tools
Welsh assembly: Sustainable Public Sector Food Procurement	An overview of sustainable food procurement in the public sector and how it relates to Wales specifically.	http://www.assembly.wales/Research%20Documents/Sustainable%20Public%20Sector%20Food%20Procurement%20-%20Research%20paper-19102012-239644/12-046-English.pdf	UK Policy
Catering for Change: Buying food and drink sustainably in the public sector (Scotland)	Advice on using procurement to support economic growth, improve health and address climate change targets. The report's principles and content are equally applicable whether buying food directly or using a catering provider.	http://www.scotland.gov.uk/Resource/Doc/337607/0110844.pdf	UK Guidance
Hungry for Success: A Whole School Approach to School Meals in Scotland	This is the final report of the Scottish Executive's Expert Panel on School Meals. It builds on an audit of Scottish school catering carried out over 4 months to set out a vision for a revitalised school meals service in Scotland.	http://www.scotland.gov.uk/Resource/Doc/47032/0023961.pdf	UK Guidance
Healthy Eating in Schools	A guide to implementing the nutritional requirements for food and drink in schools (Scotland) regulations 2008	http://www.scotland.gov.uk/Resource/Doc/238187/0065394.pdf	UK Guidance

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School Food Matters	This website campaigns for better quality ingredients, school kitchens that can produce fresh food on site, more training and paid hours for catering staff and better canteens in UK schools.	http://www.schoolfoodmatters.com/	General Tools
Nordic Nutrition Toolbox		http://www.nordicnutrition.org/	General Tools
Rethinking School Food: The Power of the Public Plate	An essay linking school food reform with sustainable supply chains.	http://blogs.worldwatch.org/transforming-cultures/wp-content/uploads/2009/04/Rethinking-School-Food-Morgan-and-Sonnino.pdf	General Policy
Government Buying Standards for water-using products	UK Government buying standards for the procurement of sustainable water-using products.	https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-water-using-products	UK Policy Water
Government Buying Standards for electrical goods	UK Government buying standards for the procurement of sustainable electrical goods.	https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-electrical-goods	UK Policy Energy Efficiency
Livestock's Long Shadow	FAO report on the meat industry	http://www.besanthill.org/data/files/gallery/Content-Gallery/a0701e00.pdf	General Carbon footprint
Meat-free Thursdays homepage (in Flemish)	Provides recipe, advice and other support for introducing meat free days.	http://www.donderdagvegiegedag.be/	Belgium Carbon footprint
Meat-Free Mondays	Short videos introducing the concept of meat-free Mondays in schools	http://www.meatfree-mondays.com/news/new-video-highlights-mfm-works-well-schools/	UK Carbon footprint
The Copenhagen Green Food Basket	A tool to help balance cost, seasonality and biodiversity when awarding food tenders in Copenhagen	For more information, contact procurement@iclei.org	Tool Seasonal Organic
Children's Food Trust Seasonal Chart	A visual guide which can be used to source seasonal food and ensure a balanced menu.	http://www.childrensfoodtrust.org.uk/assets/rsrscs/british-seasonal-food-charts/cft_sfdchart_a1final.pdf	Tool Seasonal Organic
Food waste monitoring triggers improved wperformance	WRAP case study on using clear plastic bags to help reduce food waste in Ilfracombe (not in schools but could be applied there)	http://www.wrap.org.uk/sites/files/wrap/Elior_0.pdf	Ireland
Bristol Good Food Plan	A food plan put together by Bristol City Council to promote system change by outlining realistic targets and actions for all relevant stakeholders in the food industry.	http://bristolfoodpolicy-council.org/wp-content/uploads/2013/03/Bristol-Good-Food-Plan_lowres.pdf	UK General Policy Food waste

NAME	SUMMARY	LINK	KEYWORDS
The School Farms network	A database of school farms in the UK.	https://www.farmgarden.org.uk/education/school-farms-network	UK Tools Organic
Calculating the environmental impact of catering services	This GPP case study demonstrates the approach used by Helsinki to measuring their carbon footprint.	http://ec.europa.eu/environment/gpp/pdf/news_alert/Issue47_Case_Study98_Helsinki.pdf	Finland Case study Carbon Footprint
Monitoring low carbon, sustainable catering services	This GPP case study demonstrates the approach used by Turin to measuring their carbon footprint.	http://ec.europa.eu/environment/gpp/pdf/news_alert/Issue47_Case_Study100_Turin.pdf	Italy Case study Carbon Footprint
Purchase of an energy efficient commercial dishwasher	This GPP 2020 tender model for the purchase of an energy efficient commercial dishwasher shows the impressive savings that can be made by applying a life cycle costing methodology.	http://www.gpp2020.eu/fileadmin/files/Tender_Models/EN_GPP_2020_tender_model_dishwasher_BeschA_2014.pdf	Energy efficiency Case study
The U.S. General Services Administration's sustainable facilities tool	This website provides comprehensive advice on life cycle costing and guiding principles for buying more efficient catering equipment. Regulations differ in the USA and Europe, but this tool is a good aid for identifying potential problem areas.	https://sftool.gov/green-products/4/cafeteria-products?agency=0	Tools Energy efficiency
Topten.eu	This website allows for comparison of energy efficient fridges and freezers	http://www.topten.eu/	Europe Tools Energy efficiency
www.epelia.com	A German database linking food purchasers directly to suppliers.	https://epelia.com/	Germany Tools
Report on standards for food and drink in NHS hospitals	A report by the UK Hospital Food Standards Panel giving recommendations for procuring healthier, more sustainable food and catering services.	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/365960/20141013_Hospital_Food_Panel_Report_Complete_final_amended_for_website_oct_14_with_links.pdf	UK Policy
GIY (Grow it Yourself), The Living Classroom	Provides seasonal gardening tips and videos on how to plant and grow various fruit and vegetables.	http://www.giyinternational.org/living_classroom	Tools Organic
Jamie's Food Revolution toolkits	A series of practical and policy documents giving advice on everything from introducing salad bars in canteens to creating school gardens.	http://www.jamieoliver.com/us/foundation/jamies-food-revolution/school-food	Tools Policy Case Studies
Slow Food in the canteen	A report looking at ways of improving food culture for European children.	http://www.slowfood.com/education/filemanager/resources/PAC_BROCHURE_ENG.pdf	

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School Food Standards Guide	A series of posters which can be printed and displayed covering issues such as portion sizes, food groups and preparation techniques.	http://www.schoolfood-plan.com/wp-content/uploads/2014/09/School-Food-Standards-Guidance-FINAL-140911-V2C.pdf	Tools Food waste
Food waste reduction case studies	A series of case studies collected by FoodService Europe showing innovative approaches taken by its members to reduce food waste	http://www.foodserviceeurope.org/gallery/60/Food-ServiceEurope%20database%20Food%20Waste%20-%20FINAL.pdf	Europe Food waste
Prevention of food waste in restaurants, hotels, canteens and catering		http://infohouse.p2ric.org/ref/54/53132.pdf	Europe Food waste
Food waste volume and composition in the Finnish Supply Chain	This study summarises the findings of project Foodspill, which mapped the volume and composition of food waste in the Finnish foodchain from 2010-2012.	https://portal.mtt.fi/portal/page/portal/mtt/hankeet/foodspill/Food%20Waste%20Volume%20and%20Composition%20Focus%20on%20Food%20Service%20Sector.pdf	Finland Food waste
Food Recovery Hierarchy	Provides suggestions for diverting foodwaste from landfill.	http://www.epa.gov/epawas-te/conserve/foodwaste/	Food waste Tools
Treibhausgasemissionen durch Erzeugung und Verarbeitung von Lebensmitteln	An investigation into the carbon footprints of various different food groups	http://www.oeko.de/oeko-doc/328/2007-011-de.pdf	Carbon footprint GHG emissions Germany
Klimawandel auf dem Teller	An exploration of the carbon footprint of different food production processes	http://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Klimawandel_auf_dem_Teller.pdf	Carbon footprint GHG emissions Germany
Guide de la restauration collective responsable	An introduction to sustainability in public catering, most specifically compliance with various EU Directives and the introduction of organic food.	http://www.fondation-nicolas-hulot.org/sites/default/files/pdf/outils/guide_restaurant_collective.pdf	France Organic

INNOCAT – about the project

INNOCAT aims to help encourage eco-innovation in the catering sector by providing a sizeable launch market for new solutions. The project brings together public and private buyers to publish a series of tenders for eco-innovative catering products, services and solutions.

Contact

ICLEI – Local Governments for Sustainability

Leopoldring 3
79098 Freiburg

Mail: procurement@iclei.org
Web: www.sustainable-catering.eu

Project Partners



Supported by



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