At the dawn of the XXIst century, the world is confronting a global environmental crisis of a magnitude and reach never seen before. The problems we are facing are not new; human interaction with the natural world has long been producing damage to our environment. What is new is the speed at which pollution levels increase, the ozone layer is depleted, animal and plant species disappear.

Relatively new is also the awareness that these global environmental problems are seriously threatening not just our eco-systems; with them, they are also threatening the future of our economies. A few months ago Nicholas Stern, a former chief economist at the World Bank, published a seminal report showing that global warming could deliver an economic blow of 5-20% of GDP to world economies because of natural disasters and the creation of hundreds of millions of refugees displaced by droughts or sea level rise. Dealing with climate change now, the Stern report demonstrates, would cost just 1% of the world’s GDP; but if the problem is not tackled within a decade, we will have to spend almost $1,000 for every person on the planet—a figure that could push the global economy into the worst recession in recent history. The data provided by the Report are still debated and discussed; but the impact of Stern’s work in the media is clearly demonstrating that global environmental problems such as climate change have now entered the realm of policy debates in all fields and at all levels.

Food, in its most industrialized version, is an integral part of the problem—at all stages of the supply chain. At the production end, you all know, pesticides and fertilizers used by conventional farmers pollute waters, deplete the soil, kill wildlife. At the manufacturing stage, the enormous amount of fossil fuel used to process and transport food significantly adds to global warming and pollution problems. Research conducted at Cornell University showed that, in the mid-1990s, more than 100 billion gallons of oil were used every year to manufacture food in the US. More recently, it has been calculated that the average food item in the US travels between 1,500 and 2,500 miles from farm to fork (Kaufman, 2005).

Looking then at the consumption end of the industrial food chain, it becomes evident how global environmental problems are threatening even more than our natural capital and our economies. As corporate farmers have expanded their operations across the globe, rural economies have been displaced, leaving behind a series of “food deserts” where people—especially low-income people—have little or no access to fresh, nutritious and healthy food. At stake, then, is also our individual and social well-being. In the US, the public health costs associated with malnutrition have reached some $10 billion/year (Kaufman, 2005); in the UK, the government is estimating that some $20 billion are spent every year to deal with the consequences of obesity and overweight (House of Commons, 2003).

Experts today agree that there is only one way out of this global and multifaceted environmental crisis. We need to re-think the concept of development, moving beyond the narrow economic sphere to focus also on the environmental and
social dimensions of our lives. The idea goes back to exactly 20 years ago, when, in a very well-known report, the World Commission on Environment and Development introduced the notion of “sustainable development” as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987: 43).

After two decades, and endless debates over what exactly does sustainable development mean, the international scientific and policy community has finally reached an agreement over the core principles of this alternative paradigm.

Sustainable development, it is emphasized, promotes equity and justice – that is, it attempts to meet the basic needs of all human beings while also recognizing the potential for imposing risks or costs onto future generations. At the same time, sustainable development promotes democracy through an emerging vision of interconnected self-reliant, highly participatory and low-impact communities. Finally, sustainable development is about integrating environmental considerations into our development strategies, under the assumption that effective environmental protection needs economic development and successful economic development needs to take into account environmental protection.

Global environmental threats are convincing many of us to embrace the ambitious agenda for change that sustainable development has set. However, much discussion is still taking place, in both scientific and policy circles, about how to achieve the radical shift in existing patterns of production and consumption that sustainable development requires. Ironically, while theoretical debates continue to unfold and some people even call for a “new industrial revolution” to implement sustainable development, on the ground things are happening and positive changes are taking place.

In Europe, a school food revolution is under way. In some cases, it is taking place because of government’s action, under the inspiration provided by public institutions willing to sacrifice today’s wants in the name of tomorrow’s needs. In other cases, it is occurring in spite of government’s action, under the leadership of extraordinary individuals that at Cardiff University we like to call “public entrepreneurs”. In all cases, as I will attempt to demonstrate, the school food revolution is showing us the way towards a future of social inclusion, enhanced democratic participation and environmental protection – in a word, sustainable development.

My first story comes from the UK, a country in which the school meal service has for decades struggled against the powerful forces of a cheap food culture and a neo-liberal ideology that transformed what should be considered as a public health service into a commercial venture. In the name of “less public expenditure and more private choice” (Morgan, 2006: 380), during the 1980s the UK government abolished nutritional standards in schools and introduced a contracting regime, called “Compulsory Competitive Tendering”, which installed a narrow cost-based approach at the core of catering policies. It was, as Kevin Morgan (2006) has recently written, “a monstrously myopic mistake”.

Today, as the UK government is attempting to re-invent school meals after a long stream of food scares and food crises (ranging from the BSE and Foot and Mouth Disease to the obesity “ticking bomb”), the heavy legacy of the past is raising continuous challenges. Where to begin when your workforce has lost its cooking and nutritional knowledge, your school kitchens have almost disappeared and your children have become accustomed to junk (albeit more profitable….!) food??!
In a democratic society, governments are the only institutions with a general mandate to promote our collective good. At the same time, however, local authorities can sometimes experiment and address issues that are not yet “mature” on the national scene (Meadowcroft, forthcoming).

In the UK, the school food revolution did not start with Jamie Oliver. It was pioneered in Scotland, a country that is not commonly associated with good food and healthy eating. But the school food revolution seems to be dismantling every single stereotype associated with eating habits. Through collective efforts and public intervention, things can dramatically change even in a country that is stereotyped in Europe as the “land of fried Mars bars”.

In 2002, a Scottish expert panel produced a report, called “Hungry for Success”, which introduced a new vision for school meals based on three major innovations. First, it promoted a “whole school approach” to establish links “between learning and teaching on healthy eating in the curriculum and food provision in the schools” (Expert Panel on School Meals, 2002: 7). Second, it established an agenda to improve the quality of the meals and raise their nutritional standards. Third, and perhaps most crucially, Hungry for Success re-imagined school meals as an educational and health (rather than commercial) service (Expert Panel on School Meals, 2002: 7). Seen, for the first time in the UK, as a tool to tackle obesity and promote healthy eating habits, the Scottish school meal service received a financial investment of £ 63.5 million (or $ 120 million) for the years 2003-2006.

Good intentions were for the first time turned into good practice in East Ayrshire, a rural county in the South West of Scotland with a population of 120,000. This is the story of a poor rural community empowering itself through the innovative actions of a public entrepreneur, the Head of Catering, and a far-sighted Council working, as they say, in the spirit of “joined up thinking”.

East Ayrshire began its school food revolution in 2003, when, in the name of “environmental stewardship, connecting children with food and with where the food comes from”, school meals in 11 of the County’s 45 primary schools were radically reformed. Specifically:

- The amounts of pasta, rice, potatoes, fruit and vegetables were increased to promote the health benefits of the Mediterranean diet;
- Fat, sugar and salt were reduced and replaced with natural flavors, herbs and spices;
- Added colorings, artificial flavorings and GM-foods were banned;
- Fresh and unprocessed ingredients were prioritized.

To involve local farmers in the system, East Ayrshire divided the bidding contract into 9 separate lots (corresponding to 9 different categories of food) – a strategy that enabled small producers capable to supply only one product group to compete with larger national suppliers. At the same time, contracts were no longer awarded primarily on the basis of the proposed product price, as it usually happens around the UK. East Ayrshire introduced new award criteria, such as the “quality and range of foods offered” and the suppliers’ “proposed use of resources” – a criterion that rewards producers’ initiatives to promote biodiversity, to minimize packaging and waste and to comply with animal welfare standards.

We often tend to forget that the school meal market raises all kinds of challenges for small food producers. It is a seasonal market and it requires farmers to guarantee a steady supply of quality food on a daily basis. East Ayrshire’s producers do not yet make huge profits with the school market. They have decided to become
involved mostly because they share a sense of mission, a collective vision. An artisanal cheese-maker involved with the school food market said:

“I like the school [market], because [...] if you educate them to good eating, then it starts to affect the whole structure of the economy. Later on, when they grow up, and they have children, it gets passed on”.

[SF]or the quality meat producer supplying the local schools:

“The business we do with East Ayrshire is very important to us in terms of dealing with a local customer, we don’t want to lose that customer [...]. We need to look over each other. Children are the future of any company. Children are the future”.

The reform has now been extended to 25 schools, with a view to include all schools in the County. Today, a school meal in East Ayrshire costs £ 2.10 (ca. $4) – of which £ 1.52 (ca. $3) is paid for by the parents. The rest is covered by a Council that has understood that “with so much of this redirected into the local economy these changes deliver a net benefit to the community”. The difference between buying off national contracts and buying locally worked out 13 pence more expensive, but is now stabilized at 10 pence for a two-course meal. And it is worth to add that, in addition to creating a local food market and a new generation of knowledgeable consumers, East Ayrshire’s school meal service is also contributing to environmental sustainability. In fact, switching to local suppliers has reduced the average distance travelled per menu item from 300 to 99 miles – i.e., by 70%.

The second story I would like to share with you comes from Italy, a country that everybody associates with a good food culture. Hopefully my story will demonstrate that this good food culture is not a passively inherited legacy. Public institutions in Italy have long been working to implement “creative procurement” policies that shape and re-shape sustainable models of food consumption.

Unlike what happens in the UK, in Italy public institutions interested in applying healthy eating and quality food policies can rely upon a friendly regulatory context. In 1999, the Italian government issued a national law (N. 488) that states:

To guarantee the promotion of organic agricultural production of ‘quality’ food products, public institutions that operate school and hospital canteens will provide in the daily diet the use of organic, typical and traditional products as well as those from denominated areas, taking into account the guidelines and other recommendations of the National Institute of Nutrition.

A law of this kind, no doubt, opens up significant room for manoeuvring for local authorities willing to design sustainable school meal systems. However, it does not necessarily make it easier on the ground to turn the principles of sustainability into practice. In fact, when, a few years later, the city of Rome became interested in the potential of green food procurement, it had to immediately realize that there are all kinds of barriers to overcome and challenges to meet. For example, at that time the organic food market in Italy was not capable to guarantee the continuity of supply needed by a City that feeds 140,000 school children every day for 190 days a year (we are talking about some 27 million school meals/year).
As in East Ayrshire, the Roman authorities began their “quality revolution” by changing the bidding system. In 2002, three essential criteria were introduced:

- GM-foods and frozen vegetables were banned;
- The meals provided had to be nutritionally balanced;
- Fresh, seasonal and organic fruit and vegetables were required.

At the same time, however, innovative award criteria were introduced to further develop the socio-environmental quality of the products and services offered. In particular, catering companies were rewarded for:

- The “organizational characteristics” of the service proposed (including the environmental certifications they possessed and the environmental friendliness of the transportation system they utilized);
- “Projects, interventions and services” proposed to reduce acoustic pollution in the school canteens and to promote food education amongst the users of the service;
- Their capacity to supply additional organic food products.

This award system was a winning strategy in the Roman school food revolution. It delegated to the contracted companies the responsibility of improving the environment of the school canteens; it encouraged them to broaden the range of socio-environmental goods and services on offer; it stimulated the organic food market, leading suppliers to start adding new items to the list of required organic foods. Most important, this incentive system introduced a new set of quality standards that have progressively conquered all actors in the food chain. As the Director of Education told me, the new award system immediately helped people to understand that “quality in Rome will never be sacrificed again”.

The year 2004 marked the beginning of a new phase in the Roman quality revolution. Under the paramount priority of promoting and protecting children’s health, in the 2004-2007 bidding documents Rome:

- Specified the modalities to be adopted for the conservation, handling, cooking and distribution of the food;
- Introduced healthy mid-morning snacks (fruit tarts, bananas and bread rolls) and established (on the basis of the guidelines provided by the Italian Institute of Nutrition) that these must provide 8-10% of the daily nutritional intake, whereas lunch must guarantee 35% of the nutrients children need;
- Required contracted companies to diversify their menus on the basis of children’s age and to adopt recipes (including the specified amounts of ingredients) designed by a team of nutritionists;
- Emphasized the principles of food seasonality and variety. The menus, which have a summer and a winter version, are mostly based on the use of fresh ingredients. Moreover, to ensure an adequate intake of all necessary nutrients and introduce children to different foods, it has been decided that no dish is to be served more than once every five weeks.

In addition to emphasizing the health benefits of the food served to children, Rome focused also on the social and environmental sustainability of the service by:

- Designing special menus for children with allergies and religious requirements;
Promoting Fair Trade products – under the stated objective of preventing situations in which “the actions we perform to improve our quality of life threaten the quality of life of people in other areas of the world or that of future generations”. Today, 280,000 Fair Trade bananas and 140,000 Fair Trade chocolate bars are served every week in the Roman schools, figures that have boosted by 20% the national market for Fair Trade products in Italy and that, most importantly, have helped producers from the Dominican Republic, for example, to build their own schools;

Introducing pilot schemes to start distributing unutilized foods to charity associations helping the poor;

Encouraging the use of products coming from “bio-dedicated” food chains – foods that have been produced, processed, packaged and distributed by enterprises that operate exclusively in the organic sector.

The City of Rome has invested € 166 million (ca. 200 million dollars) to subsidize the school meal service between the years 2004 and 2007. Practically, this means that the Roman families pay only half of the total cost of the meal (€ 4.11, or ca. $5) and that low-income families receive a 25% discount on their monthly fee, whereas for poor families the service is entirely free. As in East Ayrshire, behind this investment is the pioneering vision of an administration convinced that the benefits of sustainable development outweigh its costs —or, quoting Walter Veltroni, the Mayor of Rome, that

“There is no real development without social quality[…] No single action can meet its objectives unless it takes place within a context in which the priority is […] a strong sense of community, a type of development that becomes real because the level of social inclusion increases”.

This week the City of Rome has entered the third stage of its quality revolution. Two days ago, the new tender (to which I have had the privilege to give a contribution) has been presented to the public. Unlike the previous two, this tender will cover 5 years of service (from 2007 to 2012) so as to help producers making long-term plans. The price paid to the catering companies has also been increased to € 5.20, a figure that certainly rewards the efforts and investments they have made over the years. In exchange, catering companies have now been asked to provide also “guaranteed freshness”, or, in simple terms, products that have been harvested no longer than 3 days before getting on the children’s table. Significantly, amongst the parameters introduced by the tender to assess the “guaranteed freshness” of the proposed products, there is also the calculation of the “food miles”. In addition to enhancing the environmental sustainability of the service, this criterion, which to my knowledge has never been used before, will enable Rome to complete its school food revolution by promoting a relocalization of the supply chain.

In conclusion, the school food revolution we are witnessing today is acquiring very different characteristics across the globe. In countries like Italy, the revolution is almost imposed top-down by institutions that are attempting to take action today to protect our quality of life in the future. In countries like the UK, by contrast, it is inspired by the initiatives of enlightened individuals committed to the present and the future of their own communities. In all cases, however, the school food revolution always shares one important feature: it is a dynamic and creative process of change that is shaping new values, mobilizing new resources and building new communities.
This is not just about food per se. Actions we perform every day in ordinary settings speak much louder than words about the kind of world we have created or we are about to create. How and what we eat at school is a social action, through which children of different socio-economic status and ethnic background may be given an important opportunity to interact and to learn all together about the benefits of healthy eating and informed consumption. What we eat at school is also an economic action, which can ideally create new and significant markets for quality food producers that have so far been too often marginalized (or even displaced) by the forces of globalization. And what we eat at school is also an environmental action, holding the potential to support productive systems that capitalize on ecological resources and lower food miles – with all the benefits that this may have in terms of reducing pollution levels and tackling climate change. In a word, what we eat at school means much more than just satisfying an individual need; deciding what kind of food we should consume in our schools provides a unique opportunity to start building our **collective** commitment to a sustainable future of economic development, environmental conservation, democracy and social justice.