



Slow Food®

**Climate Change
and the Food System
Position Paper**



Introduction

Through this position paper, Slow Food seeks to address the intersection between the food system and climate change and to describe possible pathways for tackling the climate crisis through the adoption of environmentally-friendly practices along all stages of the food supply chain, following a “seed to landfill” trajectory.

We will begin by framing the relationship between food and climate. This will provide a brief overview of the key issues and present statistical evidence in order to gain a better grasp of the problems. We will then explain why Slow Food is engaging in the climate debate. The first section will thus provide an introduction to Slow Food’s guiding principles and the organization’s involvement with environmental issues. We will then turn to the core section of the briefing paper by outlining a general “Slow Food approach” to tackle the climate-unfriendly consequences of food production and consumption. For each issue, a conclusive section, “Slow Food in action”, will describe existing good practices being implemented by Slow Food.

1. Food and climate

1.1 What food system are we talking about?

The modern, industrialized agri-food model that has asserted itself over the last 50 years or so may have brought benefits in terms of increased productivity, but its impact on the environment has been devastating: pollution, soil erosion, scarred landscapes, reduced energy resources and an overall loss of diversity, both biological and cultural¹. Under this model, agricultural production has assumed the characteristics of the industrial sector, taking a new shape, which can be referred to as agro-industry or agribusiness. The two hallmarks of the system, namely the increased use of oil-derived or oil-based inputs (fertilizers and pesticides, fuel for farm machinery) and the production of only limited plant varieties (monocultures), primarily to produce animal feed, have had severe consequences on the environment and jeopardized the economic survival of small-scale farmers.²

Under this model, natural resources are considered as mere raw materials to be consumed and processed on a massive scale, entailing the unbridled use and indiscriminate exploitation of resources such as water, land, soil and forests. This is leaving a disturbing legacy and the future prospects for the health of our environment are bleak. With the world’s population expected to increase from 6 to 9 billion by 2050, competition for natural resources will become even more fierce and place additional pressures on an already ailing planet. Needless to say, the global food system as it stands needs a radical overhaul if its impact on the environment is to be reduced

1 Petrini, C. (2007) *Slow Food Nation: Why Our Food Should Be Good, Clean, And Fair*.

2 See Chapter 5 of the document *Food Policies and Sustainability* (Slow Food, 2010) available at http://www.slowfood.de/w/files/slow_themen/food_policies_eng.pdf

significantly. The next section will provide some context, supporting these considerations with facts and figures.

2.1 Cold hard facts: Food, climate and natural resources

- In the last 100 years we have seen a global rise in average surface temperature of 0.74°C. The period between 1995 and 2006 has been the warmest since records began in 1850. We are also experiencing a rise in ocean temperatures, rising sea levels, even faster warming in the Arctic, ocean acidification, an increase in the intensity of extreme weather events and shifts in the life cycles of plant and animal species.³
- A study by the United Nations Environment Programme (UNEP) confirmed that agriculture and food consumption are among the most important drivers of environmental pressure, with a particular impact on habitat change, climate change, water use and toxic emissions.⁴
- The combined production of nitrous oxide and methane by agriculture are thought to have approximately the same impact on climate change as the transport sector.⁵
- In Europe, it has been estimated that agriculture contributed to 9% of the EU-15's greenhouse gas (GHG) emissions in 2005. For impacts associated with the whole of the supply chain, from agriculture through to consumption, one EU report calculates (using environmental input output analysis) that the food sector in its entirety accounts for around 31% of the EU-25's GHG emissions.⁶
- According to an Intergovernmental Panel on Climate Change (IPCC) report, nitrogen fertilizers are the largest single source of emissions from agriculture, accounting for 38%.⁷
- Meat production accounts for nearly a fifth of global greenhouse gas emissions. These are generated during the production of animal feed, for example, while ruminants, particularly cows, emit methane, which is 23 times more effective as a global warming agent than carbon dioxide.⁸
- Producing 1 kg of beef leads to the emission of greenhouse gases equivalent to 36.4 kg of carbon dioxide, and this figure does not include transportation and farm infrastructure management. This is equivalent to the amount of carbon dioxide emitted by an average European car every 250 km.⁹

³ Food Climate Research Network (2008) *Cooking Up a Storm*.
www.fcfn.org.uk/sites/default/files/CuaS_web.pdf

⁴ United Nations Environment Programme (2010) *Assessing the Environmental Impacts of Consumption and Production*. http://www.unep.fr/shared/publications/pdf/DTIx1262xPA-PriorityProductsAndMaterials_Report.pdf

⁵ Friends of the Earth UK (2007) *Food and Climate Change* Available at:
http://www.foe.co.uk/resource/briefings/food_climate_change.pdf

⁶ Food Climate Research Network (2008) *Cooking Up a Storm*.
www.fcfn.org.uk/sites/default/files/CuaS_web.pdf

⁷ Intergovernmental Panel on Climate Change (2007) *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*

⁸ <http://www.guardian.co.uk/environment/2008/sep/07/food.foodanddrink>

⁹ http://www.innovationmagazine.com/volumes/v9n1/preserved-docs/62_63.pdf

- Producing 1 kg of meat through typical industrial (intensive) methods requires 20 kg of feed for beef, 7.3 kg for pork and 4.5 kg for chicken.¹⁰
- The livestock sector is by far the single largest anthropogenic user of land. The total area occupied by grazing is equivalent to 26% of the ice-free terrestrial surface of the planet. The total area dedicated to feed crop production amounts to 33% of total arable land. In all, livestock production accounts for 70% of all agricultural land and 30% of the land surface of the planet.¹¹
- The average number of miles that our food travels has doubled in the last 30 years.¹²

A number of pressing, climate-disrupting concerns directly linked to the industrialized agri-food system emerge quite clearly from the above survey, and we have not even begun to list the indirect effects or embedded impacts on climate. One striking example is that the food production industry is believed to be primary cause of deforestation which, in turn, is the leading cause of global CO₂ emissions.¹³

This necessarily concise introduction has touched upon different stages related to food, which we conveniently bundled together as “the food system”. In order to assess the effects that the production and processing of a given food product has on the environment, every step of the food chain must be taken into consideration, from production to processing, distribution, retail, consumption and waste. For the purpose of this paper, when we talk about environmental impact, “the food system” covers the entire food supply chain.

2. Slow Food and the environment

Slow Food has come a long way from its roots as a local gastronomic association, evolving into a fully-fledged international eco-gastronomic organization. In its 25 years of activity, Slow Food has undergone a gradual expansion of its focus areas, as a result of the recognition that the quality of the food that reaches our tables is inextricably linked to the work of farmers and producers, the environment and biodiversity preservation.

Slow Food’s environmental focus is grounded in both theory and practice. The environmental element in Slow Food’s leading slogan, “good, clean, and fair”, is almost self-evident. “Clean” describes food production and consumption that does not harm the environment, animal welfare or human health. A product is “clean” if it respects the planet, meaning it does not pollute, waste or overuse natural resources during its journey from field to table. Food is clean if its production process meets certain criteria

¹⁰ Friends of the Earth UK (2010) *Factory farming’s hidden impacts*. Available at http://www.foe.co.uk/resource/briefings/factory_farming.pdf

¹¹ Greenpeace (2011) *Cool Farming: Climate impacts of agriculture and mitigation potential*. <http://www.greenpeace.org/international/en/publications/reports/cool-farming-full-report/>

¹² FAO (2006) *Livestock’s Long Shadow*. <http://www.fao.org/docrep/010/a0701e/a0701e00.HTM>

¹³ Friends of the Earth UK (2010) *Factory farming’s hidden impacts*. Available at http://www.foe.co.uk/resource/briefings/factory_farming.pdf

of “naturalness”, or if it is sustainable.¹⁴ To quote Slow Food’s *Manifesto for Quality*, “the environment has to be respected and sustainable practices of farming, animal husbandry, processing, marketing and consumption should be taken into serious consideration. Every stage in the agro-industrial production chain, consumption included, should protect ecosystems and biodiversity, safeguarding the health of the consumer and the producer.”¹⁵

2.1 The underlying principles

Slow Food believes in the importance of a *holistic approach*. This entails recognizing the close interconnectedness of different aspects of food production and consumption generally perceived as distinct features: social aspects (such as the relationship between producers and consumers), environmental aspects (relating to the protection of biodiversity, the protection of natural resources such as water and soil, food distribution, packaging and food waste) and cultural aspects (the protection of traditional knowledge). Objectives such as protecting biodiversity, fighting climate change, developing local economies and small-scale production and safeguarding local knowledge, traditions and culture should not be interpreted separately. Instead, each objective must be set and pursued as part of an overall strategy that takes all the other elements into account simultaneously.

The key principles that underpin Slow Food’s work and have a close connection to the environment can be summarized as follows:

(a) Improving the sustainability of production methods

Two contrasting models of food production can be identified: industrial production and small-scale production. There is a tendency to associate the former with the generation of profits and development, while the latter is often perceived as an activity aimed at mere subsistence. However, such a narrow vision does not take into account the fact that small-scale agriculture makes optimum use of resources and produces more food than industrialized agriculture, if we consider the food system in its entirety and not just individual commodities. In the long term the industrialized system imposes unsustainable costs on natural resources. It causes soil erosion, water pollution and a loss of habitat for wild species. The protection and development of small- and medium-scale food production and local economies thus becomes vital. A local food production system has the advantage of supplementing healthy, nutritious food with social responsibility, prioritizing ecological systems, eliminating or reducing chemical products and safeguarding traditional techniques and knowledge. Local food is fresher, protects local varieties and species (not to mention traditional production methods), travels fewer miles and requires less packaging. It also allows producers and consumers to have more information and greater control over production and distribution systems. Protecting sustainable methods of food production and small-scale food production means protecting the environment.

14 Petrini, C. (2007) *Slow Food Nation: Why Our Food Should Be Good, Clean, And Fair*.

15 Available at <http://www.slowfood.com/international/2/our-philosophy>.

(b) Resource conservation

Our world's natural resources (like soil, rivers, seas or forests) are essential for food production and the attainment of food security. However, the industrial agri-food model has led to the indiscriminate exploitation of these resources, based on the misguided notion that they are inexhaustible. This production model is also responsible for high levels of pollution, largely on account of its use of chemical products such as fertilizers. The present environmental situation is revealing the inefficiency and unsustainability of this development model. Natural resources are far from infinite or indefinitely renewable and are being permanently degraded. Slow Food believes that the sustainable management of natural resources is vital for future climate-friendly food production as well as for ensuring adequate food and water to future generations.

(c) Energy efficiency

Dependence on fossil fuels is one of the hallmarks of the modern agri-food system and one of the key underlying causes of environmental pollution. The unsustainability of a system that depends largely on fossil fuels has been further exacerbated by the decision of many governments to incentivize industrial agrofuel production. To opt for these energy sources, regarded as "sustainable" even when they are applied on a large scale, has particularly negative repercussions on the agricultural sector, where they enter into direct competition with products for human consumption. If farmers stop producing food and only grow corn intensively to fuel biogas plants, the "renewable energy" business ends up becoming a threat to the environment. Slow Food agrees that the energy inputs required for agri-food production must be supplied largely by renewable resources, but also believes this should be done by delocalizing centres of electricity production, setting up short energy supply chains and small-scale plants.

(d) Defending biodiversity

The wealth and variety of biodiversity allows nature to survive by adapting to environmental change, climate change and disease. Without diversity, nature itself would be destined for extinction. The world's biodiversity is in critical condition, seriously threatened by intensive farming and other unsustainable methods of food production. Today, 90% of the food we consume comes from 120 species. Just 12 plant species and five animal breeds provide more than 70% of all our food. It is estimated that, in the last century, three quarters of the genetic diversity of agricultural crops have disappeared. A third of native cattle, sheep and pig breeds are extinct or on the verge of extinction. From environmental, economic, social and cultural perspectives, this represents an immense loss. Slow Food promotes the protection of domestic biodiversity, first and foremost through knowledge (the mapping of traditional products, native breeds and local edible plant varieties and ecotypes), and then by supporting and promoting specific supply chains (cultivation, breeding, processing).

(f) The short supply chain

One of the ways the Slow Food helps small-scale producers improve their techniques and product quality is by organizing producer exchanges. By meeting each other and talking, producers can share problems, experiences and solutions. These exchanges create links between communities and increase their awareness of belonging to the same network.

(g) Sustainable diet

Consumer choices have a significant impact on the entire agricultural and food system and, therefore, on climate change. For example, in many developed countries, the consumption of animal protein, fuelled by the low prices ensured by industrial livestock breeding, is excessive (annual meat consumption in the EU is at 89 kg per capita). In addition to health-related problems, such consumption trends also bring severe environmental consequences. Yet consumers hold a lot of power: with increased awareness of the value of their choices, they are in a position to redirect the market and production. To continue the example of meat consumption, to enable consumers to eat more meat at cheaper prices, breeders fatten animals very quickly, leading to poor welfare and large quantities of inferior products. Cheap meat reaches the market and the cycle starts over again as the low prices persuade consumers to buy more meat. Slow Food wants consumers to become more responsible and informed. To achieve this, it promotes the spread of knowledge about the effects food choices have on health as well as the environment. To this end, Slow Food is actively seeking to reconstruct the severed link between producer and consumer, while promoting a more informed and responsible attitude on both sides.

(h) Protecting traditional knowledge

Slow Food defends traditional knowledge, a source of wisdom and know-how that lies at the core of technical and scientific learning. If properly protected, it can become a vital element in local economic systems and help spread environmentally friendly methods of food production and consumption. The participation of farmers is an essential element to ensure the spread of sustainable practices and, for this reason, the horizontal sharing of knowledge among farmers is of crucial importance.

2.2 Activities

Turning to Slow Food's wide-ranging practical engagement with the environment, it must be noted that, in Section 3, the "Slow Food in Action" paragraphs will describe a number of projects in greater depth. For this reason, the present section will only sketch a very general picture.

Reducing the environmental impact of Terra Madre and Salone del Gusto: Concrete results from the 2010 edition

The first example of a project covering a number of interconnected environmental objectives is the reduction of the environmental impact of Slow Food's largest events to date, the 2010 editions of the Salone Internazionale del Gusto and Terra Madre. This project involved 22 concrete actions, implemented to create a new model for organizing fairs with considerably less overall environmental impact, from greenhouse gas emissions to waste. Through more efficient planning of many aspects, like **setting up stands, transport of goods, communication, waste management and water and energy use**, exhibitors and visitors were asked to become the event's **co-organizers**, active players in a complex system in which their behaviour determines the final reduction of the negative environmental impact of the whole event system.

Some of the key results can be summarized as follows:

Waste: the amount of waste from the events has been reduced by 79 tonnes when compared to the 2008 edition, a reduction of 34.5%. Of the total 156.5 tonnes of waste produced, 91.58 tonnes were recycled by separating plastic, glass and aluminium, wood, paper, organic waste, PET bottle caps and corks. Moreover, in partnership with the Buon Samaritano project and through the event *Ne Avanza Per Me?*, 6 tonnes of leftover food were recovered and redistributed. Over 7 tonnes of compost for agriculture were produced from 15.65 tons of 93% pure organic waste, obtained through the use of biodegradable materials (plates, cups, cutlery and other food containers). This helped avoid 10.6 tonnes of CO₂. Salone del Gusto and Terra Madre helped reduce the average daily production of waste in the city of Turin in October by 8.4%, amounting to 43.4 tonnes for each day of the five-day events.

Event setup: 98% of materials used to set up the event were recyclable and reusable.

Water: drinking water was distributed via water dispensers rather than plastic bottles, thus avoiding 2.23 tonnes of CO₂.

Energy consumption reduction: despite an increase of the event surface area, the energy needs only decreased from 4,600 KW in 2008 to 4,151 in 2010, thanks to more efficient planning (use of energy-efficient light bulbs and refrigeration).

Paper: the use of paper for written materials was reduced by 27 tonnes at Salone del Gusto (from 626,000 to 457,000 square metres, saving 55.4 tonnes of CO₂), in part replaced by 3,000 USB sticks for journalists and QR codes for participants, who could download the material on their phones.

Transport: a reduction of 48.4 tonnes of CO₂ was registered in the area of transportation.

Slow Food's commitment to reducing the environmental impact of its events continues. Organizers and exhibitors at every international Slow Food event (Salone del Gusto and Terra Madre and other events such as Cheese and Slow Fish) are working to limit negative environmental effects as much as possible in the ways described above.

Other examples include the establishment of Earth Markets, community-run markets where local producers offer healthy, quality food directly to consumers at fair prices and guarantee environmentally sustainable methods. In order to protect and promote food biodiversity and allow local communities to survive and thrive, Slow Food, through the Slow Food Foundation for Biodiversity, coordinates and sponsors projects to support small-scale food producers: the Presidia, A Thousand Gardens in Africa, Earth Markets and the Ark of Taste. These environmentally-conscious initiatives will be described in greater detail in the following sections.

The network

At the time of writing, Slow Food has 100,000 members in 153 countries, eight national offices in Italy, Germany, the United Kingdom, the Netherlands, France, Switzerland, the United States and Japan and supporters worldwide; 2,000 food communities in the Terra Madre network and over 10,000 small-scale producers involved in Presidia projects. National associations are established in the countries with enough members to support an autonomous organization with national headquarters. Countries where Slow Food has not yet established national associations have national branches run by national executive committees and *convivia* (local Slow Food chapters), which coordinate Slow Food events and projects. A *convivium* is a local Slow Food chapter, a group of members who spread the Slow Food philosophy and turn it into reality by organizing events aimed at promoting quality, small-scale, local products and bringing consumers and producers closer together to reduce intermediaries in the food market and therefore the ecological costs of transportation, storage and packaging.

One of Slow Food's key strengths lies in the fact that it has become a truly global movement. The importance of reaching such a large number of individuals and communities cannot be underestimated. Such a system fosters the exchange of information and the transfer of knowledge among small-scale producers and food communities, helping them improve their techniques and product quality and share problems, experiences and solutions. These exchanges create strong ties among communities and increase their sense of belonging to the same network. The Terra Madre experience has demonstrated that local economies gain strength when they linked within a network, when they become "intercommunicating nodes"¹⁶ and allow people to connect and travel. To quote the United Nations Special Rapporteur on the Right to Food, Olivier De Schutter, networks are a crucial asset for the dissemination and sharing of knowledge, as well as spreading good practices.¹⁷ In this regard, the networks of food communities and *convivia* equip Slow Food with a unique and very powerful tool for sharing knowledge.

3. Tackling the climate crisis with a Slow Food approach

Having established that the food system contributes to climate change, Slow Food believes that it can be part of the solution, as a "good, clean and fair" food system may hold immense potential for mitigating climate change.

In order to realize this potential, Slow Food advocates for a food system based on localized, ecological, biodiverse and low-external-input methods of production, harvesting, fishing, pastoralism, processing and distribution. Such production methods do not disrupt existing ecosystems, increase agricultural biodiversity and improve the

16 Petrini, C. (2010) *Terra Madre: Forging a New Global Network of Sustainable Food Communities*.

17 UN Special Rapporteur on the Right to Food (2011) *Report: Agroecology and the right to food*. Available at: <http://www.srfood.org/index.php/en/component/content/article/1174-report-agroecology-and-the-right-to-food>

resilience and adaptability of production and harvesting systems, especially to the threats posed by climate change. Such a food system is knowledge-intensive and ensures the survival of systems that “conserve, develop and manage localized food production and harvesting and increase synergies with nature”.¹⁸

3.1 Putting the food system on the environmental agenda

Despite the alarming data, it is still not universally acknowledged at the international level that the food system is among the most crucial contributors to climate change. When discussing global warming, emphasis still appears to be placed on sectors other than agriculture, such as energy, heavy industry and transport. Discussions on how to mitigate climate change usually focus on improvements in energy efficiency, decreasing fossil fuel use and a shift towards renewable energy.¹⁹ Despite agriculture’s leading role in fuelling climate change, the sector was not on the agenda at the December 2009 UN Climate Change Summit in Copenhagen nor mentioned in the Copenhagen Accord.

On a European level, assessing EU policies that deal with the intersection between climate and food is very difficult and complex: policy areas range from agriculture, fisheries, forestry, transport, water, natural resources, products, industrial policy and foreign policy. A thorough analysis is beyond the scope of this document. However, on a general level we can say that if Europe wants to meet its international environmental obligations, it must take concrete action with regard to the food system by acknowledging its significance and its cross-cutting nature. European policies and programmes must take this sector into account in its entirety and as a matter of priority. Moreover, a truly comprehensive outlook must reach beyond EU borders and consider the impact of the foreign production of goods consumed or used in Europe, thus tackling indirect emissions linked to food.

The European Union is at a crossroads when it comes to potential climate change mitigation. Many policies currently under review open up possibilities for welcome shifts in climate-friendly directions. The first example is the reform of the Common Agricultural Policy (CAP), which Slow Food has thoroughly assessed. A position paper on possible directions has been produced.²⁰ Another opportunity will arise with the definition of the 7th Environmental Action Programme (EAP). A further policy area which must be closely monitored relates to sustainable consumption. The European Commission’s Sustainable Consumption and Production (SCP) Action Plan, presented in 2008, will be reviewed in 2012. Slow Food will also closely monitor the implementation of the recently published Roadmap to a Resource Efficient Europe.

¹⁸ Petrini, C. (2010) *Terra Madre: Forging a New Global Network of Sustainable Food Communities*.

¹⁹ Stockholm Environment Institute and Friends of the Earth (2009) *The 40% Study Mobilising Europe to achieve climate justice* Available at:
http://www.foeeurope.org/climate/FoEE_SEI_40_study_summary_Dec09.pdf

²⁰ See Slow Food’s Position Paper on the Common Agricultural Policy (2011) *Towards a New Common Agricultural Policy* available at
http://content.slowfood.it/upload/2011/C2744B88142b319C88MK77E7D540/files/position_pac_eng.pdf

Slow Food recommends:

Climate change policies at local, national, regional and international levels should reflect the fact that some of the biggest environmental impacts come from the production and consumption of food and tackle the issue accordingly.

3.2 Climate-friendly food production

Within the food supply chain, growing crops and rearing livestock have the largest impact on climate change. As we have seen, if the clearing of forests to free space for farm land is included, agriculture is estimated to be responsible for nearly a third of global greenhouse gas emissions. Apart from deforestation, the biggest causes of agricultural greenhouse gas emissions are the use of fertilizers (38%) and rearing livestock (31%), in the form of methane and nitrous oxide.²¹

The abandonment of an industrial agri-food system and the adoption of sustainable agriculture practices can play a very important role in fighting and preventing negative consequences. Sustainable agriculture involves less dependence on fossil fuels, uses techniques that maintain humidity and carbon dioxide in the soil, protects soil from erosion, slows down desertification and uses water in a better way. Slow Food advocates this type of agriculture. Thanks to the techniques it employs, it renders an irreplaceable service in the fight against climate change.

3.2.1 Agriculture

A new agriculture for the planet

There is an urgent need for new kinds of farming, a truly *new agriculture*. Sustainable methods can take their starting point from the small (or large, depending on where in the world you are) amount of knowledge that has not been eliminated by agroindustrial methods. This will not be a return to the past, but rather a new beginning that grows out of the past, with an awareness of the mistakes that have been made in recent years. It will involve making productive again those areas where agriculture has been abandoned because it was not viable due to industrial criteria; preserving, improving, spreading the knowledge of the traditional practices which are demonstrating that other modes of production are possible; and giving new dignity and new opportunities to the people who have been marginalized by the globalization of agriculture. Only through a new sustainable agriculture that respects both old traditions and modern technologies [...] can we begin to have hopes for a better future.

Source: *Slow Food Nation: Why Our Food Should be Good, Clean, and Fair*, Carlo Petrini (2008)

²¹ Friends of the Earth UK (2007) *Food and Climate Change* Available at: http://www.foe.co.uk/resource/briefings/food_climate_change.pdf

A number of keywords can describe the “new agriculture” advocated by Carlo Petrini in the above excerpt: ecological, sustainable, small scale, local, traditional. The overarching principle is a rejection of all that is unnatural or that “introduces unsustainable artifice in the relationship between man and the environment”.²²

Slow Food recommends:

- **Pesticides and chemical fertilizers are not sustainable and should be avoided as much as possible.** Farmers should reduce their use of pesticides and choose integrated systems of pest management that rely primarily on biological, cultural and physical controls. Avoiding chemical fertilizers and herbicides leads to increased soil fertility, increases carbon sequestration and avoids bare land.
- **Intensive methods of production must be rejected.** The focus must be not on increasing production, but rather on improving production methods and making them “cleaner”. Soil must be treated as a living organism and cannot be exploited. Small- and medium-scale farming must be supported.
- **Preference must be given to local plant/crop varieties.** Their survival ensures the biodiversity that enables the natural system to regulate itself. They are part of the ecosystem where they originated and evolved and guarantee the survival of that ecosystem. Moreover, industrial varieties created solely for high yields reduce biodiversity and require too many natural resources to complete their life cycle.
- **Monocultures must be rejected.** They lead to the impoverishment of biodiversity. Extensive monocultures make room for themselves and drive away the flora and fauna native to the local ecosystem.
- **Agroecological practices must be embraced.** The core principles of agroecology include “recycling nutrients and energy on the farm, rather than introducing external inputs; integrating crops and livestock; diversifying species and genetic resources in agroecosystems; and focusing on interactions and productivity across the agricultural system, rather than focusing on individual species.”²³ Agroecology is highly knowledge-intensive, hinging on techniques that are not delivered top-down but are developed in harmony with farmers’ knowledge and through experimentation.²⁴
- **Traditional knowledge must be preserved** To quote the president of Slow Food, Carlo Petrini, agroindustry has become both executioner and victim as far as food production is concerned. Executioner because the unsustainable methods promoted by the model have led to the disappearance of many sustainable production methods, once part of the identity of the communities that practiced them. Victim because the same unsustainable methods, originally developed in order to feed an expanding world population, have transformed agriculture into a neglected sector, completely detached from the lives of billions of people. Industrial agriculture has destroyed vital aspects of knowledge about local ecosystems and the agricultural technologies necessary to make a transition to a

²² Petrini, C. (2010) *Terra Madre: Forging a New Global Network of Sustainable Food Communities*.

²³ Altieri, M. (1995) *Agroecology: The Science of Sustainable Agriculture*.

²⁴ UN Special Rapporteur on the Right to Food (2011) *Report: Agroecology and the right to food*. Available at: <http://www.srfood.org/index.php/en/component/content/article/1174-report-agroecology-and-the-right-to-food>

post-industrial, fossil-fuel-free food system. **Local production** helps maintain agricultural traditions and knowledge, as local foods are best grown if they are cultivated according to tradition.

- **A new agricultural model must be advocated for Europe.** This is a topical moment for European agriculture, as the Common Agricultural Policy (CAP) is undergoing a reform process. A thorough analysis of the CAP and Slow Food's position on possible avenues for its reform in environmentally friendly directions can be found in the document *Towards a New Common Agricultural Policy*.²⁵

3.2.2 Animal production

The livestock sector is clearly one of the key contributors to the most serious environmental problems. Animal products generally have a higher climate impact than plant products, often producing approximately 2 to 30 kg more CO₂ equivalents per kilo of product. The findings of the United Nations Environment Programme's Resource Panel report suggest that livestock should be a major policy focus when dealing with problems of land degradation, climate change, air pollution, water shortages, water pollution and biodiversity loss. In its seminal report, *Livestock's Long Shadow*, the FAO warns us that livestock's contribution to environmental problems has reached "a massive scale" and "its potential contribution to their solution is equally large".²⁶ Since the report's publication in 2006 a huge number of books, scientific articles and campaigns have addressed this problem. The common conclusion appears to be that the impact of the livestock sector on climate is so significant that it needs to be addressed with urgency, especially in light of the alarming statistics reported in Section 1.2.

Slow Food recommends:

Slow Food is not calling for a world without meat, but the meat-producing system Slow Food envisages differs sharply from the one now practised in the developed world. It is based on low-energy inputs, low waste and small-scale practices. In other words, once again, a "good, clean and fair" system. Slow Food advocates:

- **The raising of native animal breeds.** Such breeds have adapted over time to local climate and geography, evolving in harmony with the area and its inhabitants. Due to this adaptation, such species are more resistant and do not need constant treatment with antibiotics and hormones. Native breeds must be favoured and protected because they are linked to a specific geographic place and its traditions, as well as the local environmental, social and economic context.
- Forms of breeding that avoid the excessive concentration of stock and instead focus on **small- or medium-scale production.**
- Farming techniques that **respect animal welfare.** To respond to the growing

²⁵ See Slow Food's Position Paper on the Common Agricultural Policy (2011) *Towards a New Common Agricultural Policy* available at

http://content.slowfood.it/upload/2011/C2744B88142b319C88MK77E7D540/files/position_pac_eng.pdf

²⁶ FAO (2006) *Livestock's Long Shadow*. <http://www.fao.org/docrep/010/a0701e/a0701e00.HTM>

- demand for meat produced quickly and cheaply, pastures have been replaced by permanent stall housing and feedlots. Animals are raised in closed environments, where all of their functions are controlled by the logic of production, with little movement, no freedom, reduced life cycles and preventive medical treatments.
- High-quality, GMO-free animal feed and, where possible, the practice of daily pasturing.
 - Limiting the use of antibiotics exclusively to cases in which no other effective remedies are available and where treatment is essential to avoid animal diseases. A ban on the use of substances designed to stimulate growth or production.

Slow Food also strongly advocates the sustainable consumption of meat and dairy products (addressed separately in the section on sustainable consumption).

3.2.3 Slow Food in action

Slow Food coordinates and sponsors a wide range of projects to support small-scale food producers in an environmentally conscious way.

Slow Food Foundation for Biodiversity

To protect and promote biodiversity, Slow Food's non-profit Foundation for Biodiversity coordinates and organizes projects in support of small producers: the Presidia, Earth Markets, the Ark of Taste and A Thousand Gardens in Africa.

www.slowfoodfoundation.org

Slow Food Presidia

The Presidia are projects that involve food communities and protect native breeds, plant varieties and food products (bread, cheese, cured meats, wine, etc.). Their objective is to save traditional, artisanal, quality foods, strengthening producer organization, promoting local areas, preserving traditional techniques and knowledge and promoting environmentally and socially sustainable production models. There are currently over 300 Presidia in 53 countries, of which 192 are in Italy.

Environmental objectives (defending biodiversity, improving the sustainability of products, etc.) are essential for all Presidia. Each production protocol requires producers to eliminate or reduce chemical treatments, guarantee animal welfare (using extensive farming systems, adequate space, no forced feeding), defend, where possible, local breeds and native plant varieties, use ecological packaging and favour the use of renewable energy.

Two fundamental concepts underpin the environmental sustainability of Presidia projects: the environmental suitability of crops and the optimization of cultivation techniques. When we look at ecotypes, varieties and native plant species in general, we see a crucial interaction between crop characteristics and environmental factors, particularly climate and soil. Only when they grow in their optimal environment can plants express the best balance between quality and quantity, minimizing the need for external inputs. Plants grow better in their own habitat and can provide high-quality produce in optimal quantities. By using a set of **production rules**, Slow Food seeks to assist and educate Presidia producers to fertilize the soil and control pests and diseases without the use of synthetic chemicals. Alternative solutions are proposed and implemented, covering both materials and cultivation methods. All the Presidia follow the principles of integrated farming and many have gone further and adopted organic farming methods, with some already certified organic. The Presidia rules for breeds and their meat products ensure that farming methods are sustainable, animal welfare is respected and feed comes from natural sources. Sometimes the initial conditions are already optimal (wild or semi-wild farming methods) and should be maintained. More frequently the Presidia aim to move gradually towards sustainability within the chain.

Presidia **production protocols and guidelines** can be found at
http://www.slowfoodfoundation.org/pagine/eng/presidi/pagina.lasso?-id_pg=84

Terra Madre

This network launched by Slow Food in 2004 brings together everyone who wants to preserve, encourage and promote methods of **sustainable farming, fishing and food production techniques in harmony with nature, the landscape and tradition**. The first nodes in this network were the food communities, which were subsequently joined by chefs and cooks, representatives of the academic world, young people and musicians from 160 countries. The main event is a biennial meeting in Turin, Italy, flanked by other regional and international events and gatherings where members of the network can meet, talk and share common problems. Local experiences emerge as possible solutions to be replicated elsewhere.

www.terramadre.org

A Thousand Gardens in Africa

The project was launched at Terra Madre 2010 in Turin. Thanks to international mobilization, a thousand school, community and urban food gardens will be created in 27 African countries in 2011-2012. Local communities will prioritize **traditional produce** (vegetables, fruit, culinary and medicinal herbs), use **sustainable production methods** and draw on the knowledge of older generations.

http://www.slowfoodfoundation.org/pagine/eng/orti/cerca.lasso?-id_pg=30

Slowfood magazine

The February 2009 issue of *Slowfood* magazine was devoted to the environmental impact of meat eating, with a large section entitled "*The Flesh is Weak*". The issue included many articles on meat consumption and its consequences, alternatives to meat consumption, animal welfare and ways to choose better quality meat. Interviews with Michael Pollan and Satish Kumar on the topic were also featured.

<http://editore.slowfood.com/editore/eng/prodotti.lasso?cod2=00027>

3.4. Food miles: The short distribution chain

Long distance food supply chains are one of the hallmarks of the globalized economic system. They lie at the very core of the problem of greenhouse gas emissions, depending on the heavy use of fossil fuels. The now familiar term *food miles* is still being used to describe how far our food travels before it reaches our table. However, the long distances travelled by food have implications not only in terms of transport, but also storage (refrigeration, for example) and packaging, adding to the environmental impact.

Slow Food recommends:

The key to the solution involves spreading the concept of zero food miles and reducing emissions from transport within the food supply chain. Solutions where farmers and food producers sell and distribute their food to local consumers must be promoted; less fossil fuels are used for transportation because the distance from farm to consumer is shorter.

- **Encouraging the spread of the short distribution chain.** Local economies allow us to skip middlemen in the supply chain. This involves developing local agriculture in cities and forms of direct sale in the countryside, including farmers' markets and different types of consumer groups. Members of these groups might buy directly from growers or place orders online and collect goods from local collection points.
- Increasing access to local and sustainable foods.
- Encouraging solutions that establish a partnership between farmers and consumers, such as community supported agriculture.
- Promoting urban agriculture projects.
- Promoting quality, small-scale, local products.

3.4.1 Slow Food in action

Slow Food organizes events aimed at bringing consumers and producers closer together to reduce intermediaries in the food market and thus the ecological costs of transport, storage and packaging.

Earth Markets

The Earth Markets are an international network of farmers' markets, created according to Slow Food's principles. An Earth Market hosts only small-scale farmers and artisan producers who sell their own products. In this way they can explain the quality of their goods and take personal responsibility for their work. Earth Markets are not only a place to shop for food, but also offer taste education activities and workshops. The markets follows a common set of guidelines, with some flexibility to account for different economic and cultural circumstances within the international network. Products presented at the Earth Markets are **local, seasonal, produced using sustainable methods and sold at a price that is fair for both the producer and the consumers**. They are good, clean and fair.

http://www.earthmarkets.net/pagine/eng/pagina.lasso?-id_pg=4

An urban agriculture project: Nutrire Milano

The aim of the project (which involves a partnership between Slow Food and the University of Milan) is to design a system of services and infrastructure to redefine the spatial characteristics of the metropolitan area of Milan (the city and the South Milan Agricultural Park) and realize an efficient and effective food chain in harmony with sustainable and innovative urban agriculture objectives.

The project seeks to support best practices and existing resources (in agriculture and processing) and create new services (distribution). The project will contribute to redesigning the city's infrastructure and services to create direct relationships of exchange with the South Milan Agricultural Park and its resources, creating a model of urban agri-food excellence.

3.5 Sustainable consumption: Toward a new consumer model

A growing body of research suggests that if we wish to achieve substantial reductions in food-related environmental impacts, then we must address not only *how* we produce,

distribute and process food, but also *what* food we eat. Returning to the example of meat, a 60% less meat-intensive diet in Europe would result in a reduction of methane and N₂O emissions as well as a reduction in N₂O emissions from fertilizing crops for animal feed well beyond EU borders.²⁷ Present meat consumption patterns are alarming and future predictions even more so: according to the FAO, global demand for meat and milk is set to double by 2050.²⁸ If we take Italy as an example, each individual consumes on average 250 grams of meat a day, a total of 92 kilos a year. For a healthy diet, the recommended amount is around 500 grams a week.²⁹

Consumers as co-producers

Industrial food production appeals to only one type of consumer: a consumer who is not very aware and only concerned about a few parameters, the most important being price in relation to quantity. It takes advantage of the laziness of the consumer, who does not want to be involved in collective choices and isolates just a few variables, ignoring all the others.³⁰ In Slow Food's vision, local economies can transform the act of consumption, which has become impersonal, wasteful and unsatisfactory, into an active choice. Slow Food has coined the term "**co-producer**" to describe a new kind of consumer, a consumer who regains awareness of their choices and establishes a direct link with food and the people who produce it. Co-producers recognize food's value and pay for it accordingly. This is because physical (or virtual) proximity to places where production takes place helps consumers feel more involved in the process that brings food to their table. More information is available and the consumer can also learn to appreciate food that is very different from what emerges from agro-industry. Consumers can become co-producers only if the context is localized.

The paradigm shift in consumption promoted by Slow Food is of crucial importance in environmental terms: consumers' buying power provides an opportunity to strongly influence supply and production methods and, in our specific context, influence the spread of environmentally-friendly methods. Therefore, Slow Food recommends:

- **Empowering consumers and raising their awareness about the consequences of their food choices.** Given that increased consumer awareness is a powerful tool to influence the market and production, Slow Food wants consumers to assume a more responsible, informed attitude. They must have information about the effects food choices have on health, the environment and the production system.
- **Raise awareness of concrete steps that can be taken.** Overall, consumers should be encouraged to take small steps towards changing their eating habits and moving towards a sustainable diet, limiting in particular the quantity of meat

²⁷ Stockholm Environment Institute and Friends of the Earth (2009) *The 40% Study Mobilising Europe to achieve climate justice* Available at:

http://www.foeeurope.org/climate/FoEE_SEI_40_study_summary_Dec09.pdf

²⁸ FAO (2009) *The State of Food and Agriculture*. <http://www.fao.org/docrep/012/i0680e/i0680e.pdf>

²⁹ Slow Food/EuropAid Publication *Diamoci un taglio!* Available at

<http://www.slowfood.it/sloweb/C2744B880a41b1C0A7myT1FC4402/scarica-le-guide-al-consumo-responsabile-slow-food>

³⁰ Masini S. and Scaffidi C. (2008) *Sementi e Diritti*.

and dairy products in their diet. Such steps may include:

- **Buying local.**
- Choosing farmers' markets or solutions which reduce the distance between the producer and the consumer.
- Knowing where food comes from and how many miles it has travelled.
- Trying to buy organic foods.
- Buying **less meat**, and meat of better quality (locally produced, free-range), avoiding meat from factory farms. Varying types of animals and breeds, choosing alternative meats and less popular cuts. Choosing meat from consortia, associations or companies with strict specifications on diet and animal welfare, as well as clear information about product traceability. **Reading labels carefully.**
- Eating more grains, vegetables and oil seeds instead of meat and dairy products.³¹
- Avoiding, when possible, large supermarket chains.
- Buying **seasonal** and fresh produce.
- Avoiding packaging when possible, or choosing foods with less packaging or eco-friendly packaging. Products with consumable, returnable, refillable, or reusable packaging should be preferred and over-packaged items should be avoided.
- Reducing food waste by buying only what can realistically be consumed. Only buying fresh meat and produce in quantities that can be consumed quickly.

3.5.1 Slow Food in action

Food education

For Slow Food, educating means promoting the **pleasure of food** among young people, adults and children, helping them rediscover conviviality, be aware of their buying choices and **respect the seasons**. It means promoting the diversity of flavours and places through courses, events, seminars, games, awareness-raising campaigns and publications. With the Master of Food courses for adults, school gardens and Taste Workshops at events, Slow Food draws the general public to food and taste education by playing with the senses and giving rein to creativity. Several projects are discussed in **boxes 15 and 16**.

<http://slowfood.com/education/>

Slow Food Manifesto on Education

http://www.slowfood.com/education/filemanager/resources/manif_edu_eng.pdf

³¹ See *In Boccal Lupino*, Slow Food Guide to Responsible Consumption. Available in Italian at: <http://www.slowfood.it/sloweb/C2744B880a41b1C0A7myT1FC4402/scarica-le-guide-al-consumo-responsabile-slow-food>

Slow Food's sustainable consumption guides

Slow Food has published four guides in a series called "*Mangiamoli Giusti*" (Let's Eat Right) to educate consumers on how to shop for food while respecting sustainability, seasonality and quality. The guides cover aquaculture, how to shop for fish, how to shop for meat and how to substitute animal proteins with pulses and vegetable proteins. Based on the fact that our food choices have environmental, social and economic implications, Slow Food's guides offer simple and direct advice on how to buy food, and include recipes and other tips.

<http://www.slowfood.it/slowweb/C2744B880a41b1C0A7myT1FC4402/scarica-le-guide-al-consumo-responsabile-slow-food>

Bridging the gap through Slow events

Organized for the eighth time in 2010, the **Salone Internazionale del Gusto** is a biennial fair and market organized in Turin in collaboration with the Piedmont Regional Authority and the City of Turin. Open to the public, it gives space and exposure to quality food and wine from all over the world. Through Taste Workshops, Dinner Dates, Street Food, the Enoteca, the Theatre of Taste and the Marketplace, visitors can immerse themselves in a global food village.

<http://www.salonedelgusto.it/pagine/eng/catalogo.html>

Cheese is a major biennial event dedicated to quality cheese from all over the world. It was held for the eighth time in September 2011. It is organized in odd years (the Salone del Gusto is held in even years) in Bra, Piedmont, the headquarters of the Slow Food movement. Cheese hosts a large open-air market in the town's streets and squares, showcasing Slow Food dairy Presidia and educational initiatives to teach people to appreciate milk in all its shapes and forms.

http://cheese.slowfood.it/welcome_en.lasso

Slow Fish is an international exhibition devoted to seafood and sustainable fishing organized by Slow Food in Genoa. Contrary to what many people think, the sea is not an inexhaustible source of food. At Slow Fish, educational events, Taste Workshops, the marketplace and conferences address the problems of wetlands, freshwater habitats and the sea. The exhibition was held for the fifth time in 2011.

http://www.slowfish.it/welcome_eng.lasso

Collective consumption

Slow Food does not only focus on individual consumption behaviour. Aligning the public provision of food with criteria for sustainable diets would bring benefits for health, biodiversity and climate. Slow Food has launched several projects in schools and hospitals, including the following:

Dream Canteens

One of Slow Food's key missions is to promote quality everyday food that will impact positively on the health and lifestyle of individuals and communities. It works towards this goal through a wide range of educational initiatives and projects, with a particular focus on widening its reach by introducing good, clean and fair food to public canteens in schools, hospitals and workplaces.

In **Europe**, this has led to the creation of the **European Schools for Healthy Food** network, which has the following main objectives:

- improving school meals, making them fresher, more flavourful and more balanced
- promoting conviviality at the table
- encouraging taste education inside and outside the classroom and during meals for a better understanding of food and consumption choices
- respecting the environment through sustainable production, food waste reduction and recycling
- encouraging the use of seasonal, local and sustainable food and promoting a shorter production and distribution chain
- developing school gardens and using their produce in the canteen
- organizing trips to visit producers and their workplaces
- teaching the geography and traditions behind each dish
- training canteen staff
- promoting exchanges and twinning between schools in the network

In the **United States**, over 300 Eat-Ins (shared meals in public spaces) were held in September 2009 to launch Slow Food USA's Time for Lunch campaign, a drive to improve the food that more than 31 million children eat at school everyday, and to lobby Congress to take serious action to prevent child obesity and health problems in its revision of the Child Nutrition Act in 2010. Legislators were asked to add at least \$1 billion to the act, and to strengthen nutrition standards and help schools start farm-to-school programs. Over 150,000 people wrote or signed a petition in support of the campaign. In August 2010, the Senate passed the Healthy, Hungry-Free Kids Act, providing an additional \$4.5 billion over ten years to federal child nutrition programmes including the National School Lunch programme. At the time of publishing, the House is yet to pass the bill, due 30 September.

Slow Food France launched its campaign "Haute Qualité Alimentaire" to improve public catering services in various cities across the country, with collaboration from local authorities, including Millau and Bègles. It has also produced a video on good practices in school canteens and organized a summer university in 2009 on the topic of hospital, school and company canteens. Leading the way with its local actions, the Slow Food Bayonne Convivium has been working with local primary schools to improve the food served in their canteens for several years. Today more than 4,000 pupils are served school lunches by a social enterprise, which employs both unemployed and disabled persons, uses produce sourced within a 30 km radius and includes one fully organic meal each week.

Slow Food Italy conducted a survey on the quality of food served in schools across the country and has drafted a Manifesto for Good, Clean and Fair Canteens. It is also working with the Piedmont Regional Authority's Education Department and the University of Gastronomic Sciences to improve catering services at universities. Slow Food Italy also drew up a charter of the rights to pleasure, conviviality and food quality of the ill, together with the Piedmontese Agriculture and Health departments and the cancer department of the San Giovanni Hospital in Turin, outlining some basic principles for the diet of hospital patients.

A good, clean and fair canteen programme is now operating in this hospital as well as the Alice Hospital in Darmstadt, Germany. The Alice Hospital programme has developed guidelines for assessing food producers and their products and today the hospital offers patients good, healthy food and encourages the growth of a local food network.

BOX 13. School gardens

Slow Food USA led the first national project promoting food gardens in schools in 2001. Members planted vegetable gardens on school grounds where children could grow their own food, develop horticultural skills and stimulate their senses. An Educational Committee was set up to launch the project nationwide, and in just two years 30 school gardens sprang up around the US. The Garden-to-Table project has since expanded to include after-school cooking programmes and farm tours.

The initiative soon spread to Europe. At the Slow Food International Congress in 2003 it was decided that every convivium in the world should work to set up school garden projects. In 2006, the Slow Food Italy National Congress in Sanremo agreed to create 100 gardens in Italy. Today in Italy more than 125 school gardens are part of the national *Orti in Condotta* programme, which includes a three-year curriculum on sensory, consumer and environmental education, as well as lessons on food culture and the local area. Schoolteachers are trained to teach the programme and they work with parents and grandparents to support the children's project. Today there are over 180 Slow Food school gardens around the world.

The school gardens have similar educational themes, adapted to the local culture of each country. Slow Food views all schools with food gardens as part of the same large network of learning communities. School gardens follow the three fundamental Slow Food principles of **good, clean and fair**. Good, because they are accompanied by workshops that teach children and parents to appreciate the sensory qualities of food and to demand quality in school canteens. Clean, because young people learn to use organic and biodynamic production methods, to search for the seeds of local fruit and vegetable varieties and to reduce food miles by favouring local produce. Fair, because they encourage the passing on of knowledge from one generation to the next, acknowledge the social role of the elderly and volunteers, value the work of farmers and lead to partnerships with similar projects in developing countries.

3.6 Processed foods: Unfriendly and unhealthy

Globalization has led to a transition away from local, seasonal diets and towards industrially processed foods, which are increasingly leading to food-related diseases and a general spread of unhealthy lifestyles.

Unfriendly: In purely environmental terms, very energy inputs are required to make processed foods. The Swedish Food Administration commissioned the Swedish Institute for Food and Biotechnology to conduct a Life Cycle Assessment (LCA) study of snacks and soft drinks in order to quantify their impact on greenhouse gas emissions and energy use.³² The products studied were crisps, sweets and soft drinks. As just one example, the climate change contribution from the production of crisps is 2.2 kg of CO₂ equivalent per kg of product – around 20 times higher than the raw material (potatoes).

³² Nilson, Sund and Floren (2011). *The environmental impact of the consumption of sweets, crisps and soft drinks*. Available at <http://www.scp-knowledge.eu/knowledge/environmental-impact-consumption-sweets-crisps-and-soft-drinks>

Unhealthy: Hundreds of millions of individuals in industrialized nations suffer from malnutrition. Often it is hidden, but can also be accompanied by obesity resulting from the consumption of highly processed foods low in essential nutrients.³³ The situation in the European Union exemplifies the paradox: out of a total population of just under 500 million inhabitants, 42 million live in conditions of severe deprivation (Eurostat, 2010), more than 250 million are overweight (European Commission, 2010) and 15.5% are obese (European Commission, 2010). How did this come about? Generally, people who live in cities are increasingly detached from the sources of their food, and so they purchase packaged and highly processed food with little understanding of the health consequences or environmental costs. Advertising promotes unhealthy changes in consumers' tastes and behaviours. The easy availability of "tasty" food (i.e. rich in sodium, saturated fat, trans fatty acids and simple sugars) and communication strategies contribute to the shift away from local food systems and towards supermarket chains. This generates standardization of tastes and erosion of food variety.

Slow Food recommends:

We must fight the misconception that **healthy food is expensive** and, in times of crisis, the only viable solution is fast food or poor-quality, processed food from discount stores. Slow Food believes that two simple rules should be followed: seeking quality outside the consumer system and rediscovering good practices at the household level.

Rule 1: To exit the system it is necessary to turn to **alternative distribution channels**. In every town and city there are markets where consumers can buy high-quality produce directly from farmers at advantageous prices. The **seasonality** of foods must be respected; in season, fruits and vegetables cost less.

Rule 2: In order to follow good practices at the household level, consumers must recover long-forgotten **cultural knowledge**. A good example of this involves cuts of meat. The loss of artisanal skills in industrial slaughterhouses means much edible meat is discarded. Less-prized cuts are no longer in demand because consumers are not used to eating them and don't know how to cook them. Yet choosing less popular cuts of better quality meat (locally produced, organic and free range) means saving money and gaining in health benefits.

Adapted from Terra Madre, Carlo Petrini (2010)

As a general recommendation, consumers are advised, to quote Anna Lappé, to "**reach for real food**"³⁴, as this is fundamental to improving our well-being and nutrition as well as the health of the environment.

³³ See Post Carbon Institute (2009) *The Food and Farming Transition: Toward a Post-Carbon Food System*

³⁴ Lappé, A. (2010) *Diet for a Hot Planet*, p. 204.

3.6.1 Slow Food in action

The \$5 Challenge campaign

Slow Food USA launched the \$5 Challenge campaign in response to a lack of access to fresh fruits and vegetables and the increasing numbers of Americans eating fast food over home-cooked meals. The \$5 Challenge Day of Action was on September 17, when hundreds of gatherings took place nationwide around the theme of good, clean and fair meals for less than \$5 a person. People were invited to pledge to cook a Slow Food meal for five dollars or less or organize a community potluck or meal where diners pay no more than \$5. The \$5 Challenge is also a response to the current widespread concern about the nation's unhealthy eating habits and the impact the industrial food system has on community, animal and environmental health. The \$5 Challenge will give communities an opportunity to come together, to share a meal and to begin a conversation about what needs to change within their local food system. Nationally, the campaign will bring attention to the challenges many people face in trying to feed their families healthy, sustainable food, from a lack of access to the rising price of fruits and vegetables and the falling price of soft drinks and junk food.

http://www.slowfood.com/international/slow-stories/106761/taking-back-the-value-meal?-session=query_session:42F948F018edf38F7AUMy349B560

3.7 Food waste

Approximately 90 million tonnes of food (179 kg per capita) are wasted in the European Union every year. Of this waste, 42% occurs at the household level and 39% in the manufacturing sector (European Commission, 2010). Future projections suggest that, by 2020, the amount food wasted every year will rise to 126 million tonnes. An extremely worrying and paradoxical picture thus emerges: despite the vast quantities of wasted food, the number of people who have no access to a proper diet is increasing. According to 2008 data, about 81 million people in the European Union (17% of the population) are at risk of poverty and 42 million are living in conditions of extreme deprivation (Eurostat, 2010).

Food losses represent a waste of the resources used in production, packaging, transportation and storage, such as land, water, energy and inputs. Producing food that will not be consumed leads to unnecessary CO₂ emissions in addition to the loss of economic value of the food produced.³⁵

Reducing food waste is a major challenge and one which Slow Food is committed to tackling. Slow Food strongly believes that food losses should be kept to a minimum.

³⁵ FAO (2011) *Global Food Losses and Food Waste*. Available At:
http://www.fao.org/fileadmin/user_upload/ags/publications/GFL_web.pdf

Slow Food recommends:

- Awareness-raising and public information campaigns on food waste, targeted at specific sectors as well as **consumers**. Consumers must learn how to get the most from the food they buy and to waste less.
- Urging regulators and policymakers (at international, national and regional levels) to make the reduction of food waste a matter of priority and a key element of all national food, agricultural and social policies.
- Excess or leftover food from the food industry, the catering industry and the public sector must not go waste. Food redistribution programmes channelling discarded food to charitable groups, such as **food banks**, must be encouraged.

3.7.1 Slow Food in action

Last Minute Market

Last Minute Market, a non-profit spin-off from the University of Bologna, is an organization that works closely with Slow Food. LMM published a “Joint Declaration Against Food Waste” in partnership with the Stockholm Environmental Institute, ANDES (France), Food Cycle UK and the Danish movement Stop Wasting Food. The declaration was presented to the European Parliament and wants to increase awareness of food waste among European institutions, aiming for a 50% reduction by 2025, and make food waste a priority on the EU agenda.

The text of the “Joint Declaration Against Food Waste” is available at:

http://www.lastminutemarket.it/media_news/wp-content/uploads/2010/12/JOINT-DECLARATION-FINAL-english.pdf

Slowfood magazine

The June 2010 issue of *Slowfood* magazine was devoted to discussing the problem of food waste with a wide array of articles on the topic.

<http://editore.slowfood.com/editore/eng/prodotti.lasso?cod2=00027>

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