



Slow Food®

**Preserving biodiversity,
preserving the planet**

A document to illustrate Slow Food's position
on biodiversity in Europe



Each one of us is unique, and so are animals, plants and all living things, even the smallest microorganisms. In 1986, in an attempt to effectively explain the concept of diversity among the organisms that inhabit the Earth, entomologist Edward O. Wilson introduced the term *biodiversity* during the first American National Forum on Biological Diversity, held in Washington, D.C.

The term biodiversity indicates the diversity of life on various levels – from the most basic one (gene diversity) to the most complex (ecosystem diversity). It is the result of many components that influence each other and – thanks to this interdependence – live and evolve. “Any change in an ecosystem will sooner or later trigger a chain of transformations which may even involve ecosystems found in remote locations, with repercussions on the entire biosphere. Environmental balances are complex and delicate” (Balboni, 2007).

This is why today biodiversity is acknowledged as the greatest richness of the planet. Paul and Anne Ehrlich – both ecologists at Stanford University – compared the large number of species in an ecosystem to the rivets that keep an airplane together. By randomly popping a few rivets, the structure becomes weaker, and the day when the aircraft will fail or crash – after exceeding a certain threshold - will come sooner (the “rivet hypothesis”, 1981).

Peter Raven (a botanist at the Missouri Botanical Garden) estimated that each time a plant becomes extinct, 10 to 30 other species collapse with it, just like a house of cards.

Each species that lives on the Earth had an origin, and sooner or later is destined to die. In other words, each age has a rate of physiological extinction. However, the speed at which species become extinct has dramatically increased in the past few decades. According to the estimates by Edward O. Wilson, species are disappearing at a rate of about 27,000 per year.

According to a recent study by the University of Exeter, UK – the largest study conducted to date on climate change data – the current reduction of biodiversity may lead to the extinction of 10% of all living species by the end of this century.

Taking this speed into account – which is one thousand times faster than in previous eras – the English scientists have concluded that the Earth is going through its sixth mass extinction. The fifth, 65 million years ago, caused the extinction of dinosaurs.





According to the latest IUCN (International Union for Conservation of Nature) “Red List”, more than one third of the world’s known animal and plant species are at risk of extinction. The study also reveals that 21% of mammals, 30% of amphibians, 12% of birds, 28% of reptiles, 37% of fresh water fish, 70% of plants and 35% of invertebrates are currently classified as endangered.

The main difference between today’s species extinction and those of the past lies in the causes, which are not only natural events with a physiological progress. What we are facing is a true global ecological crisis, which involves land and sea ecosystems and where the main actor – who also bears the most responsibility, putting enormous pressure on natural habitats – is humankind.

The loss of biodiversity does not only involve wild species, but also agrobiodiversity, namely the animal breeds and plant varieties which, since the birth of agriculture 10,000 years ago, have gradually and consistently been domesticated to be grown or raised to produce food.

According to FAO estimates, 75% of agricultural crop varieties have disappeared and three quarters of the world’s food come from only 12 plant and five animal species. In the US, for instance, 7,000 apple varieties and 2,500 pear varieties were once grown but today just two pear varieties account for 96% of the entire market. Another example is potatoes: it is estimated that over 5,000 varieties existed in the world, while today it is primarily four varieties that are grown for commercial purposes.

This loss has direct consequences on the food we eat. Out of around 30,000 edible natural species, just 30 crops provide for 95% of the entire world’s nutritional requirements. Of these 30, wheat, rice and corn provide more than 60% of the calories consumed worldwide (FAO, 1999).

Domestic animal species are in a similar situation. According to the latest report on the status of animal genetic resources in the food and agricultural sector - published by FAO in 2007 - 20% of the races surveyed in the 169 countries involved in the study are at risk of extinction. About 60% of these are mammals; the remaining 40% are poultry species.

The loss of biodiversity is caused mainly by population growth, especially in the most biodiversity-rich areas (such as tropical areas); the destruction and fragmentation of natural habitats (deforestation, urbanization, development); intensive agriculture; pollution and global climate change; and the introduction of invasive species.

The destruction of rainforests, for example, has accelerated dramatically, with dire consequences for biodiversity as these ecosystems host more than half the world’s land species. Ten million hectares of rainforest are cleared or degraded every year – the equivalent of a football field being cleared every two seconds.

The model of industrial agriculture – based on intensive production; monocultures; a limited selection of plant varieties and animal breeds; external synthetic inputs such as fertilizers and pesticides; and increasingly, cultivation of genetically modified organisms – is marginalizing traditional, small-scale agricultural systems, which rely on a large number of species, cultivars and breeds, selected for their ability to adapt to different environments.

The drastic reduction in agrobiodiversity jeopardizes the survival of local and sustainable farming systems, and vice versa. Local varieties are the most suited to the given climate and soil, and grow best in the area where they have naturalized over the centuries, thanks to man’s work. They are more resistant and thus require less external intervention. As a consequence, local varieties are both environmentally and economically more sustainable. The same applies to indigenous breeds, which are hardy and have adapted to all terrains and the harshest climatic conditions.

Biodiversity is a unique and precious genetic, but also cultural, social and economic asset. Without the variety of life



forms, life itself would disappear, because living beings would lose the ability to face changes, to adapt and thus to survive. Together with genetic pools, we also lose skills, knowledge, and languages. Local economies and cultures are compromised.

For all these reasons, “the political cause we fight for is not an ideological choice: it’s literally about the survival of the planet” (Massa, 2005).

Slow Food and agrobiodiversity

Slow Food – founded in 1986 as an association of gastronomists – has always been characterized by an interest in local territories and cultures, and by the desire to spread food culture and the right to the pleasure of taste among the largest possible number of people. Even in the first years of activity, these two traits suggested the future strategies of the association.

Thanks to this approach, Slow Food was soon highlighting the effects of globalization on food, in terms of variety, quality and taste.

Attention shifted **from the table to the products themselves**, an important turning point for the association based on the understanding that a deeper knowledge of food and production allows for a better understanding of the importance and urgency to safeguard biodiversity, and to promote and support the work of those who safeguard it.

Slow Food became involved in the issue of **agrobiodiversity** officially in 1997.

Slow Food projects bring together issues that are normally studied and managed by individual, specific sectors - environmental, agronomic, social, cultural and economic – in a multidisciplinary way that provides a comprehensive approach.

This strategy strongly characterizes Slow Food’s work on biodiversity. This work starts from the safeguarding of genetic resources – with the creation of an inventory of endangered species, varieties, plant ecotypes and breeds, created through an intense research effort by the entire Slow Food association and evaluated by scientific committees – but also takes into account traditional knowledge and farming, rearing and processing techniques, ecosystems (the relationship between varieties and breeds to their territory, and their particular adaptation to climates, soils, altitudes), local cultures (languages, dialects, rituals, crafts, architecture), while never overlooking the sensory approach and the attention to taste.

In this framework, the effort to safeguard biodiversity also requires the promotion of **processed food products** (bread, cheese, cured meat...). Processed food products are an important heritage of local communities. Originally invented to preserve raw ingredients (milk, meat, vegetables...), they are the result of knowledge passed down from generation to generation. Traditional processing methods are the basis of unique products that are an expression of local cultures and free producers from seasonal cycles and market fluctuations. It is often possible to safeguard local ecotypes and breeds by creating a range of processed products to sell alongside the raw ingredient.



Slow Food's projects involve a wide range of partners from different backgrounds and experiences who accept the challenge of defying traditional working models and going beyond their specialized fields: university professors, agronomists, veterinaries, teachers, cooks and small-scale producers (farmers, breeders, processors). Producers are the main guardians of biodiversity, but they are also the weakest link in the chain and, paradoxically, the least appreciated and supported.

Slow Food is not interested in safeguarding biodiversity as if it was a "museum", or in a merely academic exercise. Thus, the association's projects always have two key objectives:

1. Supporting and promoting the work of small-scale producers: farmers, breeders and food processors are the guardians of biodiversity and, with their knowledge and daily work, protect plant varieties and animal breeds in every corner of the world.

The economic sustainability of their work is an inevitable condition for their survival and requires a fair remuneration. Such remuneration, however, is dependent on their commitment to quality – as intended by Slow Food.

Quality is usually ascertained through chemical and physical analyses, tasting panels and on the basis of measurable and defined parameters. This is a technical approach, which is fine in a comparative and objective context, but does not take into account what lies behind a local product and has developed over centuries of history. According to Slow Food, **food quality is a narrative** and combines organoleptic and nutritional aspects with the environmental and social sustainability of production. Farming techniques must therefore preserve soil fertility and water ecosystems, and avoid the use of chemicals to the maximum extent possible.

Farming systems and processing facilities must safeguard the agricultural landscape and traditional architecture. The products Slow Food works with and supports must be produced by communities of producers who are committed to work together.

2. Raising awareness on the value of biodiversity, so that the issue is not confined to a specialized debate, but is shared and recognized by the public: by those who buy food daily for their home or prepare it in restaurants, hotels exhibitions and events; by teachers and land planners; and by people who simply have a vegetable garden at home.

Raising awareness requires communication activities, product promotion and consumers' taste education.

Slow Food's activities are developed for this purpose: education projects in schools, courses for adults (including the Master of Food in Italy), national and international events (which devote time and space to producers and taste education activities), editorial projects (websites, books, magazines, and Slow Food guides), awareness-raising campaigns (to safeguard raw milk production or small-scale fishing, against GMOs, to protect indigenous grape varieties, bees colony healthy etc.), and the creation, in 2004, of the University of Gastronomic Sciences.



The projects

Slow Food has implemented several projects for the safeguard of biodiversity: the Ark of Taste, the Presidia project, the Earth Markets, and community and school vegetable gardens.

The Ark of Taste

The Ark of Taste is an online catalogue of endangered high quality, traditional agricultural and food products, selected all over the world. 19 national commissions and an international scientific commission evaluate the candidatures. At the moment, the Ark contains 1,000 products from 60 countries.

The Presidia

Presidia are created around communities of producers who cooperate to develop production rules and product marketing strategies. The goal of these projects is to save indigenous breeds, plant varieties and artisan-processed products at risk of extinction. This is achieved by strengthening the capacity of producers' organizations; preserving traditional knowledge and techniques; and promoting sustainable practices. Slow Food promotes Presidia products through their stories, which describe producers, knowledge, territories, and production techniques. Thanks to the association's network, producers and consumers are brought together by: organizing events, involving cooks, and supporting direct sales channels, such as farmers' markets and community supported agriculture initiatives. The project was started in 1999 and today there are more than 350 Presidia (200 in Italy and 154 in 53 countries in the world) that involve approximately 15,000 small producers. Economic and social studies - carried out by universities and undergraduates, PhD students and researchers - have demonstrated the effectiveness of the Presidia model. Results can be measured on the basis of figures (increases in produced quantities, rise in the number of producers and in product prices), but also in terms of environmental values (higher sustainability of businesses) and social improvements (better organization of producers, higher self-esteem...).

The Alliance between Italian cooks and Slow Food Presidia

Slow Food Italy has built a network of more than 260 restaurants that use local products in their kitchens and are committed to using local Presidia products, indicating the producers on their menus.

The Earth Markets

Started in 2006, Earth Markets are collectively managed farmers' markets where local producers sell local high quality products – produced using sustainable methods - directly to consumers. There are currently 20 Earth Markets in 8 countries.

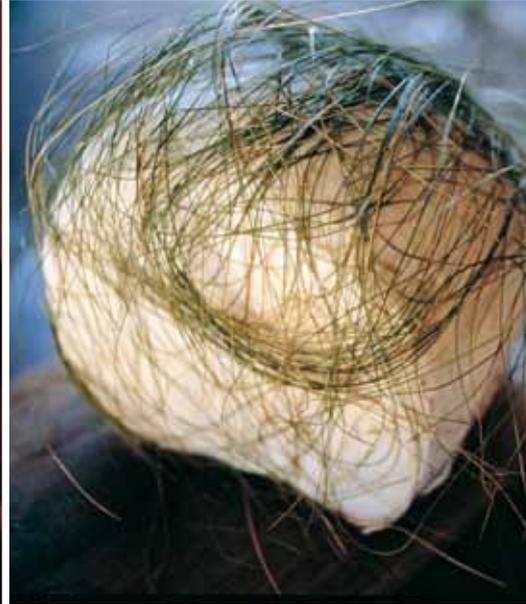
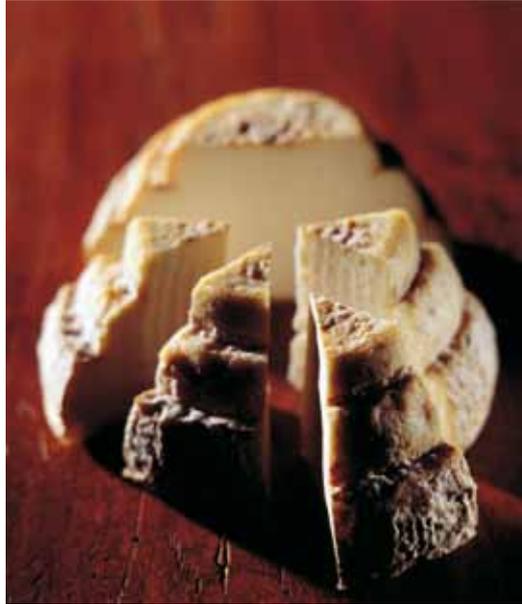


Community and school gardens

School gardens are one of the most important tools used by Slow Food in the work done with schools around food and environmental education. In particular, they promote the transmission to younger generations of knowledge related to food culture and environmental protection. In the mid 1990's, the first Slow Food school garden was started in Berkeley, California. In 2004 Slow Food Italy launched its school garden project (called "orto in condotta"), and within a few years 393 school gardens had been created across all Italian regions. School garden projects are growing in many other countries, from Germany to Belarus, and involve students, teachers, parents, grandparents and local producers.

In 2010 Slow Food launched the Thousand Garden in Africa project. Thanks to a large international effort, between 2011 and 2012 1,000 school, community and urban gardens will be created in 25 African countries. These gardens will be developed with local communities to focus on cultivation of traditional products (local varieties and ecotypes of vegetables, fruit, aromatic and medicinal herbs), using sustainable agricultural techniques. They will bring together generations, involving the local youth and based on the knowledge of the elderly.





The European Union proposals on biodiversity

Europe is home to extraordinary biodiversity: 200,000 registered animals and plants; hot spots such as the Mediterranean and the Alps; a huge wealth of cultivated varieties and animal breeds; and a key stopover for migratory species. Yet it still has not adopted appropriate measures to safeguard this diversity. Only 17% of species and habitats and 11% of the main ecosystems protected by law are in good shape, while around 25% of animal species – mammals, amphibians, reptiles, birds, butterflies – are at risk of extinction. Since 1990, the number of common bird species has dropped by 10%. This biodiversity crisis seriously harms the effectiveness of so-called ecosystem services, namely the benefits that ecosystems provide to the human species (such as food, drinking water, combustible materials, protection from floods, drought, soil degradation, and illnesses), as well as non-material benefits (recreational, spiritual, religious services).

EU institutions are aware of the situation and acknowledge the **failure of the measures adopted so far**, from historical measures to the more recent 2006 Action Plan, which had the goal of stopping the loss of biodiversity in Europe by 2010. This objective has not been achieved.

Europe has identified the weaknesses of its actions:

- The Natura 2000 network (the system of European protected sites) was managed with delays and little effectiveness, mainly because of lacking human and financial resources.
- The policies for soil protection and against invasive species are not powerful enough.
- There are no comprehensive data or sufficient knowledge on the state of biodiversity and on the main causes of its decline.
- The issue of biodiversity has not been integrated in the relevant economic and political sectors. Many actions implemented by member states have therefore proven incompatible with the goals of biodiversity protection. In fact, they have often had opposite and negative consequences.
- The funds earmarked by the European Union and member states for the safeguard of biodiversity have proven insufficient.

Also, EU actions only target wild biodiversity, natural habitats, and protected areas. Agrobiodiversity and fishing have so far been under the sole responsibility of member states and regional authorities, which have acted in disparate, non-consistent ways and with no coordination whatsoever.

The review of the EU biodiversity policies has led to the “**EU biodiversity strategy to 2020**”.

With this strategy, Europe more convincingly states its intention to adopt measures to stop the loss of biodiversity and the erosion of ecosystem services. It also commits itself to recovering, where possible, damages to biodiversity.

The European Union has set **some goals** for 2020: protecting ecosystems and natural habitats; recovering damaged ecosystems; integrating biodiversity protection in all European policies on agriculture, forestry and fishing; fighting the invasion of exotic species; and avoiding the loss of biodiversity at global level.

At least in intent, Europe clearly wants to go beyond the idea of safeguarding biodiversity through the creation of a “protected sanctuaries” (with the creation of ad hoc sites, such as protected areas). To this purpose, the Commission has identified the priority areas where the protection of biodiversity should be integrated: agriculture, the food supply industry, forestry, mining, the financial sector, and tourism.

For the first time the Commission – thanks to the role of the European Environment Agency – will measure and monitor the progress and effectiveness of its actions. A cross-sector methodology has also been defined for all projects funded by the European Union in different sectors, so as to assess their effectiveness in terms of biodiversity preservation.

At the same time, the creation of a Biodiversity Information System for Europe (BISE) has been planned. The system will contain all information on the state of European biodiversity and on the policies and provisions of the EU. The organization of available data will allow for easier access to existing information and facilitate the exchange of information at all levels: from the scientific community to the private sector.

If implemented and observed, the new rules will benefit not only those who work in direct contact with biodiversity, but also all European and non-European citizens, given the relevance of the European ecosystem in the wider global ecosystem.

Put forward by the European Commission, the “EU biodiversity strategy to 2020” has been discussed by the Council and is waiting to be examined by the Parliament.

It will be key to understand how this strategy can be integrated in the actions foreseen by the different sector-specific policies implemented by the EU at community level (such as the reform of the common agricultural and fishing policies, currently being debated).

Its importance is also linked to the commitments taken by the EU at international level, in the framework of the Convention on Biological Diversity and the subsequent agreements and treaties.

On June 23, 2011 the EU signed the **Nagoya Protocol**, an agreement which marks a great step forward for biodiversity protection. The Protocol requires that 17% of lands areas and 10% of sea areas become protected areas by 2020. It does not only deal with conservation, but it also promotes a fairer access to genetic resources and a fair distribution of the benefits deriving from their use. The agreement forces industries to share the profits gained from the use of plant and animal genes for the development of new products with local communities – usually indigenous populations who live in biodiversity-rich countries and possess thousand-year-old knowledge on their functions and properties.

The Nagoya Protocol is not operational yet. It will come into force once signed by 50 countries (42 have signed so far).

Slow Food and the New EU Biodiversity Strategy

Slow Food welcomes the European Union’s new “Biodiversity Strategy to 2020”, and above all the EU’s commitment to implement a policy based on targeted measures to slow down – and eventually stop – the loss of biodiversity in Europe.

In particular, Slow Food:

- Welcomes the fact that the new strategy contains important references to farming and fishing, although it still focuses on wild biodiversity.
- Shares the intention to promote dialogue and cooperation between experts from various backgrounds and areas of knowledge and different geographical areas - both within and outside Europe.
- Shares the acknowledgement of the active role played by the development of awareness and sensitivity among citizens on biodiversity conservation. Slow Food also stresses the need to raise awareness of the fundamental necessity to safeguard domestic biodiversity, as well as wild.
- Appreciates the strengthening of the European Business and Biodiversity Platform, to allow a real exchange of ideas and experiences between the various sectors involved in the use of soil as a resource for food production and economic exploitation. The goal is to help companies integrate biodiversity in their activities, and to raise their awareness on the competitive advantage that they can gain from its preservation. At the same time, Slow Food hopes for a deeper interest in the experiences of small-scale producers and farmers, who can give a significant contribution to strengthen the impact of the Platform.

Slow Food believes that EU biodiversity measures implemented so far have failed largely due to a lack of integration and coordination between the various initiatives, which despite being based on shareable considerations are too fragmented and focused on individual sectors. For this reason, Slow Food requests a more integrated approach to policies, actions and planning, and between the member states.

Slow Food considers the role of small-scale producers in safeguarding biodiversity - and the related policies - to be of fundamental importance; a role which must be strengthened and emphasized with specific references and clear indications.

In particular, the valuable environmental role played by small-scale production – which essentially coincides with the definition of “*High Nature Value farming (HNVF)*”¹ – is not given enough recognition, despite its importance being widely demonstrated by the international scientific literature.

These HNV areas vary according to country and offer key environmental services – not only because they safeguard the most endangered habitats and species in Europe, but also because of their contribution to carbon storage in the soil, conservation of water resources and fire prevention. HNV farmland areas are part of a rich cultural heritage: they play an active role in land use management and are often the only source of livelihood for the rural populations in some of the economically weakest areas of Europe.

Slow Food therefore believes that HNV areas and practices should be given more recognition – at the EU and member state level - and that more targeted agricultural and environmental measures are needed to support High Nature Value farming.

Slow Food emphasizes the need for more effective European measures to maintain and increase the local diversity of genetic resources, involving farmers and breeders more and increasing the resilience of ecosystems.

In the coming months, Slow Food will continue its advocacy and awareness-raising activities on the EU Biodiversity Strategy, conveying the following key messages to stakeholders:

- The European Union’s work on biodiversity must combine the preservation of natural environments and wild species with the safeguard of agricultural biodiversity. As a consequence, dialogue and cooperation between the “environment”, “farming” and “fishing” sectors will be vital.

- It is fundamental to support small-scale local producers who use traditional and environmentally friendly practices, and to widely and clearly acknowledge their role as guardians of biodiversity and landscapes. Support for the management of green infrastructures (such as parks and protected areas) and ecosystem services must be complemented by providing for the needs of small-scale farmers, fishermen and artisan producers. Such an approach can provide an example of virtuous integration between the safeguard of agricultural biodiversity and the preservation of the environmental and landscape resources of the European Union.

- The wealth of traditional knowledge linked to individual regions is an integral part of Europe’s biodiversity heritage and a key tool for its safeguard and future sustainability.

Actions to safeguard biodiversity are most effective when they relate directly to the specific context where a particular form of biodiversity originates from; outside of that context the action will not be entirely successful. In addition to genetic diversity, the wealth of knowledge, habits and customs that have allowed the survival of biodiversity over time must also be taken into account.

1 - The concept of High Nature Value Farming was introduced at the beginning of the Nineties (Baldock et al., 1993; Beaufoy et al., 1994) to highlight the positive role played by farming for the safeguard of biodiversity. This type of farmland is characterized by a very limited use of synthetic chemical products and intensive practices or by pastures with a low density of farmed animals. In High Nature Value Farmland, farming preserves or is associated with a large variety of species and habitats and/or species of European interests.

Slow Food and biodiversity: the milestones

1996 – At a conference organized on the occasion of the Salone del Gusto in Turin, the Ark of Taste project is launched.

1997 – On June 29 Slow Food publishes the **Ark of Taste Manifesto**. The first edition of Cheese, an international exhibition of high quality cheese, is organized in Bra (Cuneo).

1999 – Slow Food Italy launches the **Presidia project**.

2000 – The first 90 Presidia are featured at the Salone del Gusto in Turin. In October, the first edition of the “Slow Food Award for the Defense of Biodiversity” is celebrated in Bologna. The international award acknowledges those who work to safeguard agrobiodiversity and local traditions and cultures.

2001 – Slow Food launches the No GM Wines campaign, against the sale of genetically modified wines in Europe. The “Manifesto for the Defense of Raw Milk Cheeses” is written. Slow Food Italy launched the Master of Food, an educational program for adults in 20 thematic courses.

2002 – The 5th Slow Food Italy national congress is held at Riva del Garda (Trento). Slow Food shows its commitment to ‘eco-gastronomy’ with the creation of the **Slow Food Foundation for Biodiversity** to coordinate the Slow Food Award, Presidia and the Ark of Taste. The first foreign Presidia are created.

Slow Food publishes *Atlante dei prodotti tipici dei parchi italiani* (Atlas of typical products of Italian parks), which collects the results of a research on traditional and typical products in 19 national and 60 regional parks.

2003 – In April, in Brasilia, Slow Food signs a memorandum of understanding with the Brazilian government for the implementation of projects supporting the protection of small-scale traditional agricultural production.

2004 – In February, the FAO officially acknowledges Slow Food as a collaborating non-profit organization. In October, the first edition of **Terra Madre** is held, bringing together 5,000 food producers from all around the world.

2004 – Slow Food promotes the creation of the **University of Gastronomic Sciences** in Pollenzo (Cuneo), the first university of its kind that focuses on teaching gastronomic culture using an interdisciplinary approach that values the preservation and promotion of agrobiodiversity.

2004 – Slow Food Italy starts the **Orto in Condotta** project.

2005 – Representatives of the Italian Presidia meet in Sicily: over 400 delegates from all over the country discuss and analyze the problems of small-scale traditional productions.

2006 – Opening of the **Earth Market** in Montevarchi (Arezzo), the first in a new Slow Food network of markets to support small-scale farmers and producers.

2008 – Slow Food Italy registers the “Presidio Slow Food®” logo; over 170 Italian Presidia are allowed to use it.

2009 – Italy launches the **Alliance between Italian cooks and Slow Food Presidia**: a network of more than 260 restaurants committed to using local Slow Food Presidia products.

2010 – Slow Food Italy launch the Dairy Resistance project in collaboration with other organizations (such as Anfosc and Onaf), dairy experts and producers to focus on increasing awareness of small-scale dairy productions, raise producers’ self-worth and find new markets for their products.

2010 – Slow Food launches the **Thousand Gardens in Africa** project.

2010 – Slow Food launches three awareness-raising campaigns to promote **sustainable fishing**, condemn **land grabbing** and fight against the introduction of **GMOs**.

2010 - Slow Food Italy contributes to the text of draft bill n. 2744, put forward by Italian MP Susanna Cenni: “Provisions for the safeguard and enhancement of agricultural and food biodiversity”. Slow Food also supports the submittal and approval process.

2011 – The **House of Biodiversity** is opened in Tuscany: a new educational and exhibition space for the Slow Food Foundation for Biodiversity.

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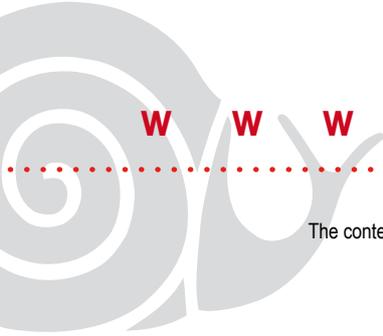
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