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Italian Food Diplomacy as soft power

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Introduction

In this work I will analyze a subject that in recent years is having a significant development in our Country, as well as a great impact on our foreign policies and on the way Italy is perceived abroad. The Food Diplomacy is the use of food heritage, and the resulting culture and history behind it, in relations with other States. Its intent goes from simple 'soft power', to the promotion and improvement of the idea of how a Country is perceived out of its borders, looking to improve the export sector. This diplomatic use of food, in fact, has ancient roots, it can be assumed to have its origins in ancient Greece and from then throughout history and places it has evolved and it is now characterized by different facets. In recent times the first to use it were the Eastern Countries, such as China, South Korea and Japan. The use of this discipline was initially seen as a new 'soft power' tool made to export a cultural model abroad. Only recently Italy began to intensify and benefit from its food culture, the quality of its products and the strong impact that the local cuisine has on the collective. In fact since 2010, when UNESCO recognized the Mediterranean diet, and especially the Italian cuisine as a World Heritage, many efforts have been made to promote, strengthen, protect and raise awareness of one of the jewels of our Country. In the first part of this paper I will analyze the history and evolution of the Food Diplomacy, its roots and the old and new features of this matter. Later, I will illustrate the theories and opinions of several expert and scholars about this discipline. Finally, I will underline the practical aspects of the Food Diplomacy and the action undertaken by some States regarding the use of this technique and the results they have produced. In the second part I will describe Italy's path that led to the current Italian policies in the field of Food Diplomacy, starting from the biggest event that was the stage for our strong international presence in this sector: the EXPO Milano 2015. I will analyze the ideas behind the EXPO and the projects that were created soon after the event and the effects that those had on our Country. In the last chapter of the thesis I

will present what is biodiversity, why it is so important and the reasons why Italy has always defended this fundamental value for its cuisine and tradition. I will consider the difficult relationship between GMOs and biodiversity and the danger that this genetic manipulation represents and the Italian battle against GMO crops. Finally I will analyze the whole legislative process and the diplomatic and bureaucratic battles waged by Italy and its efforts to convince Europe and the rest of the world to stop using this technology and promoting conservation and implementation of biodiversity. In the conclusions, I will give my personal considerations, making a prediction on future developments and uses of this subject in Italy, trying to give my personal opinion on how some aspects of the various initiatives undertaken so far can be improved.

CHAPTER I

1.1 What is Food Diplomacy?

Food is an essential part of our lives, representing history, traditions, and culture of any Country. Each of us depend on food not only to survive, but also to comfort ourselves, communicate with others, and link us to our ancestors. As Brillat-Savarin knew, food is a fundamental way in which nations affirm their identity — national cuisine is a marker by which a people self-identifies. ‘As American as apple pie’, for example, not only includes the comparison with patriotism, but inextricably connects the nation with the food, never to be separated. The power and the connection of food and nationalism brings us to take into account the potential of using this link as an instrument of international relations. This thesis would try to define the concept, which is here called ‘Food Diplomacy’, as the use of typical food and dishes as an instrument to create cultural understanding with the purpose of improving cooperation among Countries. The art of entertaining foreign diplomats and other representatives with national cuisine, is as old as diplomacy itself, but as an official theory and method to conduct diplomacy it is quite new. As this thesis will show, however, the use of Food Diplomacy is spreading and there are requirements for a greatly expanded use in the future. The idea at the base consists of two distinct but interconnected facets: public and private Food Diplomacy. Public Food Diplomacy goes under the guidance of public diplomacy, and more specifically, cultural diplomacy. Later we will explore the argument at the base of this theory, but at this point it is worth noting that Public Food Diplomacy is exemplified by governmental outreach programmes like those undertaken by the Thai and South Korean governments. Private Food Diplomacy, on the other hand, takes place behind closed doors. Commensality, from the Latin ‘the act of sitting at the table together’, is essential to diplomatic discussion. While public dialogue and large conferences can bring about decision-making, the best negotiation and conversation often happens away from

the public eye, over a meal or a drink. This difference, between public and private Food Diplomacy, will help in our understanding of what makes this instrument so strong. Food Diplomacy must not be confused with other formal connections of food and culture, or with other uses of food in diplomacy. Concerning the former, Food Diplomacy is not simply a tool of intercultural relations that makes easier relationships between people from different cultures. It does give some theoretical basis from intercultural communication, but it is strongly grounded in diplomacy theory. This work will explore the nascent field of Food Diplomacy, about which there is few academic scholarship. Using a combination of first-hand interviews, news sources and extrapolation of what research has been done until now, the thesis will attempt to analyze what is done until now and create a basis for future scholarship discussion proposing Food Diplomacy as an effective and practised form of diplomacy that gains its authority because of its use of food to unite, engage and feed both friends and enemies. The section on history will start with a discussion of ancient Greece and Food Diplomacy in pre-history, and will turn to illustrate French influence on modern Food Diplomacy. The theory of the field is not deeply researched, but the thesis will propose that such a theory can be formed using a combination of the current thinking on public and cultural diplomacy, including non-verbal forms of communication, along with contact theory, a concept borrowed from the field of conflict resolution. The practical applications of Food Diplomacy are very different and wide-ranging. For instance, some governments, mostly in South-east Asia, have been establishing culinary outreach programmes for nation branding purposes. Others have been using food as a tool of cultural exchange. At the top of such relations is the Club des Chefs des Chefs, a group of chefs of heads of state that meets periodically to discuss about their impact on it. This high-level meeting exemplifies the importance and merit of Food Diplomacy, for behind each successful leader is a supportive chef and a body of national cuisine with which to win hearts, minds and stomachs.

1.2 History of Food Diplomacy

The value of food and commensality is profoundly rooted in the history and tradition of diplomacy. Costas Constantinou, in his book 'On the Way to Diplomacy', describes the bonds between food and diplomacy in ancient Greece, as well as in the Bible. For example, both within and through the city-states of ancient Greece, commensality between public citizens was indispensable to maintain a sense of community and unity. In his book 'Politics', Aristotle discussed the importance about sharing meals within a community in order to provide a 'bond of solidarity' such as happen in the family unit¹. This was especially important between ambassadors from rival cities, public meals brought together what Constantinou calls a 'primordial corps diplomatique' to discuss allegiances, conclude aggressions, or ratify treaties. Ragnar Numelin discusses a similar notion in non-Western societies: either its function is to pay tribute to a former antagonist or to say 'if I ever break my oath, may I be slain like this beast that lies bleeding before me', a sacrifice is often used to make peace². Through ceremony and sharing a common meal, belligerent groups can set aside their struggle and decide how coexistence can be achieved. Food Diplomacy continues its historical trajectory through the advent of modern diplomacy, deeply rooted in a strong French tradition. Louis XIII's first minister Cardinal Richelieu took responsibility for creating a new system of diplomacy in which a resident embassy replaced more temporary ad hoc appointments. This new paradigm allowed for the concept of 'continuous negotiation' to take root, which created a new familiarity with the conditions and personalities with which a diplomat would be working. This familiarity, along with the elimination of deception as a tool of diplomacy, meant that a new professionalism

¹ Costas Constantinou, *On the Way to Diplomacy* (Minneapolis, MN: University of Minnesota Press, 1996), p. 128.

² Ragnar Numelin, *The Beginnings of Diplomacy* (New York: Philosophical Library, 1950), p. 200.

imbued the practice of diplomacy³. In his book “*On the Manner of Negotiating with Princes*”, French diplomat François de Callières discussed not only the strength and importance of this new diplomacy, but its connection with cuisine. As ambassadors took up residence in neighbours’ capitals, they also brought along traditions from their home Country, including cooking. De Callières stated that an ambassador’s table ‘should be served neatly, plentifully and with taste’. He goes on to say that:

‘The ambassador should give frequent entertainments and parties to the chief personages of the Court and even to the Prince himself. A good table is the best and easiest way of keeping himself well informed. The natural effect of good eating and drinking is the inauguration of friendships and the creation of familiarity, and when people are a trifle warmed by wine they often disclose secrets of importance’⁴.

This frank attitude is present in all of de Callières’ writing. The suggestion that an inebriated diplomat is an open diplomat, while universally understood, may not be directly acknowledged in today’s handbooks for diplomats. The rest of de Callières’ suggestions underscore the concept of Food Diplomacy: it is a ‘good table’ that brings important people together to create familiarity, friendship and a channel for information. One cook who put de Callières’ advice to real use was Antonin Carême, quoted above, who occupied the perfect nexus between French diplomacy and cuisine. Carême, known as the ‘king of cooks and the cook of kings’, was asked in March 1814 by Charles Maurice de Talleyrand-Périgord to prepare the meals marking the

³ Geoffrey R. Berridge, *Diplomacy: Theory and Practice* (Houndmills: Palgrave Macmillan, 4th edition 2010), p. 104.

⁴ François de Callières, *De la Manière de Negocier avec les Souverains*, UK Foreign and Commonwealth Office website under Quotations on Diplomacy and Foreign Policy , available at <http://www.fco.gov.uk/en/about-us/our-history/historical-publications/research-projects/people-policy-places/quotationsdiplomacy-foreign>, accessed on 27 November 2011.

abdication of the French throne by Napoleon⁵. According to Goldstein, ‘Talleyrand was a shrewd diplomat who understood the importance of *bon goût*, not only in negotiations but also at the table’⁶. The good taste supposedly made the embarrassing moment of Napoleon’s capitulation easier, as well as welcoming Russian Tsar Alexander I to Paris. Carême joined Talleyrand at the Congress of Vienna and given culinary support to the French delegation. As Talleyrand was negotiating his way back into the good graces of the European leadership, Carême was impressing them with cuisine, including a gâteau Nesselrode to honour the Russian negotiator and a Charlotte Russe in tribute to Tsar Alexander I. In a telling anecdote, the negotiators for each party announced their love for their own national cheese, but when Talleyrand served the Brie de Meaux brought by Carême, the competition, and perhaps France’s re-established status in Europe, was decided⁷. In recognition of France’s contribution to the history of cuisine, UNESCO included the French gastronomic meal on its list of Intangible Cultural Heritage of Humanity. Stating that ‘the gastronomic meal draws circles of family and friends closer together and, more generally, strengthens social ties’⁸, UNESCO acknowledged the power of French cuisine and meals more broadly to bring people together. Only two other cuisines have been selected to this list: traditional Mexican cuisine, whose knowledge ‘express community identity, reinforces social bonds, and builds stronger local, regional and national identities’⁹; and the Mediterranean diet, which ‘encompasses more than food’ to include ‘social interaction’ and ‘fostering intercultural

⁵ Darra Goldstein, ‘Russia, Carême, and the Culinary Arts’, *Slavonic and East European Review*, vol. 73, no. 4, 1995, p. 693.

⁶ Goldstein, ‘Russia, Carême, and the Culinary Arts’, p. 693.

⁷ Daniel Rose, ‘Late Nights at the Congress of Vienna’, *Lapham’s Quarterly*, 13 July 2011, available online at <http://www.laphamsquarterly.org/roundtable/roundtable/late-nights-at-the-congress-of-vienna.php>, accessed on 14 November 2011.

⁸ ‘The Gastronomic Meal of the French’, UNESCO website, available online at <http://www.unesco.org/culture/ich/index.php?lg=en&pg=00011&RL=00437>, accessed on 14 November 2011.

⁹ ‘Traditional Mexican Cuisine: Ancestral, Ongoing Community Culture, the Michoacán Paradigm’, UNESCO website, available online at <http://www.unesco.org/culture/ich/index.php?lg=en&pg=00011&RL=00400>, accessed on 14 November 2011.

dialogue’¹⁰. Peru has initiated its own campaign, entitled ‘Cocina Peruana Para el Mundo’, in the hope of gaining status on UNESCO’s list as well¹¹. The next section will explore how important both the social bonds that are forged and the identities that are created through a national cuisine, such as those in France, Mexico and Peru, provide us with the theoretical underpinning for the concept of Food Diplomacy.

1.3 Theorization about Food Diplomacy

The theory at the base of Food Diplomacy is not amply researched, but this thesis will propose a combination of various concepts to lay a new groundwork. This part of the work borrows the work of Costas Constantinou and Raymond Cohen to discuss the non-logocentric aspects of Food Diplomacy, and its use as a nonverbal signal on the diplomatic stage. The thesis will also refer to the work of Paul Rockower, who popularized the term ‘gastro-diplomacy’, and has written about the public diplomacy of food through the practice of nation-branding¹². Two theories of public and cultural diplomacy which borrow heavily from strong ideas of nationalism, then there will also be added concepts of soft power, found in the work of Joseph Nye, as well as the contact hypothesis of Gordon Allport. The theory as a whole combines both public and private aspects of Food Diplomacy, and focuses in particular on the concept of commensality.

¹⁰ ‘The Mediterranean Diet’, UNESCO website, available online at <http://www.unesco.org/culture/ich/index.php?lg=en&pg=00011&RL=00394>, accessed on 14 November 2011.

¹¹ Rachel Wilson, ‘Cocina Peruana Para El Mundo: Gastrodiplomacy, the Culinary Nation Brand, and the Context of National Cuisine in Peru’, *Exchange*, vol. 2, Fall 2011, pp. 15-16.

¹² For access to articles by Paul Rockower, visit online at http://uscpublicdiplomacy.org/index.php/about/bio_detail/paul_rockower1.

1.3.1 Community, Non-logocentrism and Diplomatic Signaling

Costas Constantinou, as mentioned above, discusses the concept of what he calls ‘gastronomic diplomacy’¹³. His topic is that while food has historically been considered as a facet of diplomacy, it has only been part of its ceremonial practice, not as a potential active tool of the field¹⁴. To think about gastronomy and diplomacy, we must instead consider their uses as a *locus* of community, both private and public, domestic and international¹⁵. As discussed above, Aristotle wrote about the importance of commensality to create commonality, that is, sharing a meal with either friends or enemies serves to strengthen ties and reduce antagonism. Ragnar Numelin, in his discussion of non-Western societies, discusses such various community-building practices as blood and milk-sharing rituals to create a sense of visceral fraternity, as well as great feasts to commemorate the end of hostility and the beginning of cooperation¹⁶. Furthermore, Constantinou stresses the use of gastronomy as a ‘non-logocentric form of communication’, that is, one that does not use words for functionality¹⁷. This concept lines up with the work of Raymond Cohen on non-verbal diplomatic signaling, which he discusses in ‘Theatre of Power’. Cohen defines non-verbal communication as having two aspects, both the ‘deliberate transfer of information by non-verbal means from one state to another and also from the leadership of a state to its own population on an international issue’¹⁸. This recalls the discussion above of private and public forms of Food Diplomacy: a non-verbal transfer occurs both at meals between diplomats and other representatives, as well as when a government establishes a domestic or international culinary outreach programme. As Cohen says, ‘Underlying

¹³ Constantinou, *On the Way to Diplomacy*, pp. 125-141.

¹⁴ Constantinou, *On the Way to Diplomacy*, p. 125.

¹⁵ Constantinou, *On the Way to Diplomacy*, p. 126.

¹⁶ Numelin, *The Beginnings of Diplomacy*, pp. 200-208.

¹⁷ Constantinou, *On the Way to Diplomacy*, p. 126.

¹⁸ Raymond Cohen, *Theatre of Power: The Art of Diplomatic Signalling* (London: Longman, 1987), p. 19.

diplomatic signaling is an assumption of intentionality’, and the non-logocentric message of Food Diplomacy is no different¹⁹. It serves as a powerful instrument of communication that is made stronger precisely by the absence of words. Language, especially when written, is relatively unambiguous. Even body language tells an unequivocal story. Gestures of private Food Diplomacy, however, can be made as obviously or as ambiguously as a diplomat desires. Seating arrangements and other aspects of protocol point to varying levels of power, but they can do so lightly. A carefully constructed menu can send a message, what is included and what is left off. Cohen states that a nonverbal form of communication can ‘exploit its ambiguity can be of benefit in permitting a message to be signaled whilst avoiding the sort of commitment involved in an explicit verbal statement’²⁰. When food and drink are the tool of communication, a new form of diplomatic language arises, one that all diplomats must be aware of in order to maximize its effectiveness.

1.3.2 Soft Power, public diplomacy and cultural diplomacy

Public diplomacy, and more specifically cultural diplomacy, it is structured in two levels: official and informal levels. In its official capacity, it relies on a nation’s soft power, which is defined by the political theorist Joseph Nye as ‘the ability to get what you want through attraction rather than coercion or payments. [. . .] Soft power arises from the attractiveness of a Country’s culture, political ideals, and policies’²¹. Diplomacy theorist G.R. Berridge states that the intent of public diplomacy is to exert influence on foreign governments ‘indirectly; that is, by appealing over the heads of those governments to the people with

¹⁹ Cohen, *Theatre of Power*, p. 212.

²⁰ Cohen, *Theatre of Power*, p. 35.

²¹ Joseph S. Nye, ‘Soft Power and American Foreign Policy’, *Political Science Quarterly*, vol. 119, no. 2, 2004, p. 256.

the influence upon them'²². In the words of marketing expert Bernard Simonin, public diplomacy uses the soft power framework to 'go beyond traditional diplomacy and extend to the general public'²³. The concept of cultural diplomacy narrows this further by applying a nation's cultural capital to appeal to a foreign nation's populace. As historian Nicholas Cull writes:

*'Cultural diplomacy is an actor's attempt to manage the international environment through making its cultural resources and achievements known overseas and/or facilitating cultural transmission abroad. Historically, cultural diplomacy has meant a Country's policy to facilitate the export of examples of its culture.'*²⁴ ,

The strength of cultural diplomacy is once again fitted in soft power, a government can rely on the friendlier aspects of its image to appeal to foreign governments and populations. Instead of the headlines that are usually in the news, such as military excursions, economic policies and political decisions, more pleasant topics, such as music, art and dance, can make nations famous. Food Diplomacy resides perfectly within the sphere of public and cultural diplomacy projects. It relies on a cultural resource, such as a nation's cuisine, both to appeal to foreign leaders as well as populations. As some of the historical examples illustrated, private Food Diplomacy can be used in formal settings, like around the dinner table at the Congress of Vienna or in informal setting, such as the dining room at the French Embassy, to affect the moods and opinions of policy-makers and world leaders. Many of the contemporary examples that are discussed below represent more of the outreach component of public Food Diplomacy: nations employing their culinary distinctiveness to appeal to foreign publics. Furthermore, food and cuisine are ideal examples of a nation's soft power. Nye's definition revolves around

²² Berridge, Diplomacy, p. 182.

²³ Bernard L. Simonin, 'Nation Branding and Public Diplomacy: Challenges and Opportunities', Fletcher Forum of World Affairs, vol. 32, no. 3, 2008, p. 24.

²⁴ Nicholas Cull, 'Public Diplomacy: Taxonomies and Histories', The ANNALS of the American Academy of Political and Social Science, vol. 616, March 2008, p. 33.

attraction, that is, what draws people in and appeals to them. Nothing better than food can have this universal effect. While many people simply do not care about what they eat, the simple fact that they need to eat to survive makes food a more powerful tool than other cultural markers such as music, art, or dance. Brillat-Savarin's famous aphorism 'Tell me what you eat and I will tell you what you are' inextricably links consumer and consumed, no one can escape classification based on food preferences. This can play a potent role if diplomats know foreign counterparts' predilections. It has been said that former French President Jacques Chirac built up a better relationship with the Japanese because of their mastery of French cooking and their gumption in serving him his own Country's cuisine²⁵. This strength also works for both leaders and publics trying a new food for the first time. Chef Mark Tafoya writes:

'When we try a new dish that comes from another land, we have a visceral experience of foreignness brought into our bodies, which begins the process of familiarization which can lead to great understanding of our shared tastes and values'²⁶.

The process of familiarization is the key to cultural diplomacy, it is Cull's 'cultural transmission' that brings foreign audiences to newfound respect for one's cuisine, culture and, hopefully, Country.

1.3.3 Nation-Branding

Public diplomacy is a more commercial concept, that of nation-branding, which relies on marketing and nationalism to create a strong image and to build a good reputation of a Country²⁷. This notion is based on a nation's self-image and the way in which the rest of the world see the Nation. Simonin writes that 'The nation/Country identity [. . .] is

²⁵ Pramit Pal Chaudhuri, 'Diplomats' Choice', Hindustani Times Online, 5 August 2011, available online at <http://www.hindustantimes.com/StoryPage/Print/729866.aspx>, accessed on 21 November 2011.

²⁶ Mark Tafoya, 'Diplomacy of the Dish: Cultural Understanding through Taste', in Fritz Allhoff and Dave Monroe (eds), *Food and Philosophy* (Malden, MA: Wiley-Blackwell, 2007), p. 264.

²⁷ Simon Anholt, *Competitive Identity: The New Brand Management for Nations, Cities, and Regions* (New York: Palgrave MacMillan, 2007).

what a Country believes it is (or wants to be). [. . .] Creating or reshaping an identity is an attempt to sway the image'²⁸. Simon Anholt, the creator of the theory of nation-branding, writes that a 'Country's representation powerfully affects the way people inside and outside the place think about it, the way they behave towards it, and the way they respond to everything that's made or done there'²⁹. Nation-branding attempts to improve that image in order to have outsiders view a nation more positively. Viewed commercially, a more positive view of a Country can lead to better economic relations worldwide. Academic Peter van Ham writes:

'Place branding is [. . .] required to make a Country's image work for its economy and its citizens. Although many places offer the same product — territory, infrastructure, educated people and an almost identical system of governance — they must compete with each other for investment, tourism and political power, often on a global scale'³⁰.

It is this concept of 'nation as a product' that makes nation-branding so powerful, and what makes it apropos to our discussion of Food Diplomacy. Nationalism and nation-branding play an important part in the creation of an effective Food Diplomacy campaign. Sociologist Michaela DeSoucey uses the term 'gastronationalism' to underscore this connection: 'Gastronationalism [. . .] signals the use of food production, distribution, and consumption to demarcate and sustain the emotive power of national attachment, as well as the use of nationalist sentiments to produce and market food'³¹. A nation uses the power of its cuisine as the tool of the national brand, so that when foreigners take a bite of food, they recognize it as belonging to the Country of origin, and thereby strengthen their associations with that Country. In order for a Country to

²⁸ Simonin, 'Nation Branding and Public Diplomacy', p. 22.

²⁹ Anholt, *Competitive Identity*, p. 8.

³⁰ Peter Van Ham, 'Place Branding: The State of the Art', *The ANNALS of the American Academy of Political and Social Science*, vol. 616, March 2008, p. 129.

³¹ Michaela DeSoucey, 'Gastronationalism: Food Traditions and Authenticity in the European Union', *American Sociological Review*, vol. 75, no. 3, 2010, p. 433.

exhibit itself on the strength of its food, it requires a national cuisine upon which to establish itself. Anthropologist Arjun Appadurai's work about national cuisines finds that cookbooks play an essential role in their creation, especially in a post-colonial context such as modern India³². In other situations, such as the UNESCO-recognized cuisines discussed above, it is an external source that consolidates a cuisine's national or transnational (as in the case of the Mediterranean diet) standing. Authenticity inevitably comes up in this discussion as well, as nations with relatively unknown cuisines actively work to create a brand upon which to advertise their food to the world. Anthropologist Richard Wilk writes that he was able to witness, over the course of twenty years of travelling to Belize for research, the creation of a new national pride about Belizean cuisine³³. In recently formed countries, national cuisine is a construct, raising fundamental questions about what constitutes 'authentic'. Once a national cuisine has become established, it can be exploited as a facet of a nation's brand. Ingredients, cooking techniques and culinary philosophies can be advertised by chefs and restaurants and marketed to complement a national outreach campaign. This can be an ideal approach for nations that have not been successful at creating a well-respected image. Paul Rockower writes that 'Gastrodiplomacy helps under-recognized nation brands such as Taiwan use their culinary skills to attract international attention'³⁴. As foreign populations start to recognize the existence of such a cuisine, it enters into their worldview as a Country worth noting. This is a small but important step to gaining international favour, especially in light of van Ham's portrayal of national competition for investment, tourism and political power. The commercial aspects of nation-branding must not be overlooked when we think about Food Diplomacy. As will be discussed later, many national

³² Arjun Appadurai, 'How to Make a National Cuisine: Cookbooks in Contemporary India', *Comparative Studies in Society and History*, vol. 30, no. 1, January 1988.

³³ Richard Wilk, "'Real Belizean Food': Building Local Identity in the Transnational Caribbean', *American Anthropologist*, vol. 101, no. 2, January 2008.

³⁴ Paul Rockower, 'Projecting Taiwan: Taiwan's Public Diplomacy Outreach', *Issues and Studies*, vol. 47, no. 1, March 2011, p. 126.

campaigns openly state the economic components of a national culinary outreach programme. To quote academic Philip Scranton, ‘National cuisines may be most important to the people who stand to profit the most from their construction, especially politicians, food marketers and other food professionals’³⁵. It is indeed these food professionals that benefit economically from Food Diplomacy programmes, but that should not undermine the value of the political and social aspects of outreach programmes. Foreign publics eating national cuisines are not only contributing to the cooks and farmers, but to their own understanding of nationhood and their attitudes towards the “other”.

1.3.4 Contact Hypothesis

Underlying the key components of soft power and cultural diplomacy is a more psychological aspect that is taken from the field of conflict resolution. One of the fundamental theories in this field is the contact hypothesis which asserts that, under the right conditions, contact among members of different groups will reduce hostility and promote more positive behavior in inter-group meetings. This contention is predicated on the assumption that unfamiliarity and lack of knowledge about another group create tension and potential hostility. The theory, which was created in the 1950s by psychologist Gordon Allport through a number of studies, is a powerful tool to explain how relationships evolve and change as a result of inter-group contact³⁶. Not all contact is good, Allport realized, but when used in the correct context, proximity, which includes discussion, learning and teaching, can lead to positive connections being made. Further work on contact hypothesis was done by social psychologists Marilynn Brewer and Samuel Gaertner, who studied the ideal conditions for contact to lead to positive interactions. They concluded that contact must be intimate and not superficial, and individuals must have equal status in order to overcome stereotypes.

³⁵ Philip Scranton, ‘Introduction’, in Philip Scranton and Warren Belasco (eds), *Food Nations: Selling Taste in Consumer Societies* (New York: Routledge, 2002), p. 12.

³⁶ Gordon W Allport, *The Nature of Prejudice* (Cambridge, MA: Perseus, 1954).

Furthermore, contact cannot be forced in a laboratory-type setting, but must be natural and comfortable³⁷. Psychologist Yehuda Amir continued this research to state that if contact is pleasurable, it will encourage people to seek mutual understanding and appreciation³⁸. The contact hypothesis adds to our understanding of both private and public Food Diplomacy through the fact that sharing food, whether between individual civilians, diplomats or heads of state, necessarily brings people into contact in an intimate and pleasurable setting. This is the concept of ‘breaking bread’, a phrase that is widely used in the Bible to represent the Eucharist and that has come to mean metaphorically the sharing of a meal. As quoted above, de Callières wrote that ‘the natural effect of good eating and drinking is the inauguration of friendships and the creation of familiarity’. Tafoya states that ‘the practice of sitting down together at a table and breaking bread is one of the most ancient forms of contract negotiation, sealing a deal, or promising a betrothal’³⁹. The word ‘companion’, whose meaning implies familiarity and friendship, and its relative ‘company’, itself a genial concept, come from the Latin *com*, meaning ‘together’, and *panis*, meaning ‘bread’, that is, having bread together with others⁴⁰. This theory, of course, is fully in line with the discussion above on commensal community-building, from the ancient world to today. It is not only the pleasure and intimacy of eating with others that makes culinary contact so strong. Food has such a central but understated role in the lives of every living being that its consumption and sharing invoke the basest of what it means to be alive. As Barthes writes, food is ‘a system of communication, a body of images, a protocol of usages, situations and behavior’⁴¹. Sharing a meal with someone

³⁷ Marilynn B. Brewer and Samuel L. Gaertner ‘Toward Reduction of Prejudice: Intergroup Contact and Social Categorization’, in M. Brewer and M. Hewstone (eds), *Self and Social Identity* (Oxford: Blackwell, 2004), pp. 298-318.

³⁸ ‘Toward Reduction of Prejudice: Intergroup Contact and Social Categorization’, in Eugene Weiner (ed.), *The Handbook of Interethnic Coexistence* (New York: Continuum, 2002), pp. 162-181.

³⁹ Tafoya, ‘Diplomacy of the Dish’, p. 267

⁴⁰ ‘Companion’, Oxford English Dictionary.

⁴¹ Roland Barthes, ‘Toward a Psychosociology of Contemporary Food Consumption’, in Carole Counihan and Penny van Esterik (eds), *Food and Culture: A Reader* (New York: Routledge, 2nd edition 2008), p. 29.

invokes a whole range of subliminal interactions. The host or provider may be trying to alternatively impress, or satisfy, or comfort, or disparage. The recipient may be hungry or may just be trying to be polite; he or she may be offended or awed, or may be worried about being poisoned. Many of these feelings go unstated and perhaps unacknowledged by the parties; they are so wound up in each interaction that those seated around the dinner table may not recognize the complex interactions that are occurring between parties. Food Diplomacy invokes the subconscious aspects of sharing food with others, to strong effect. A diplomat or head of state may want to impress a guest with a wide variety of local dishes; or they may want to show respect by serving the best food from the guest's home Country. US President Ronald Reagan, for example, when entertaining the visiting Gorbachevs at a historic state dinner, served Russian caviar to show respect, as well as a California wine from the Russian River valley, in reference not only to Reagan's home state but in subtle homage to the history of Russian immigrants in the area⁴². According to reports, at meetings between Japanese and Chinese diplomats, the Japanese hosts consistently make masterful Chinese cuisine, a feat that the Chinese cannot perform in reverse⁴³. The loss of face by the Chinese chefs strongly reflects on their diplomats and the upper hand is on the Japanese side of the table. Finally, while we may not think about it often, it was not long ago that heads of state needed a taster to ensure that any foreign-prepared food was safe for consumption. Had Viktor Yushchenko been more wary of what he was eating, the famous poisoning incident of the 2004 Ukrainian presidential cycle might not have occurred⁴⁴. Each of these examples of private Food Diplomacy, show that the intimacy of contact between the parties and the underlying 'system of communication' that is represented by food, can form

⁴² Peter Schifando and J. Jonathan Joseph, *Entertaining at the White House with Nancy Reagan* (New York: Harper Collins, 2007), p. 169.

⁴³ Chaudhuri, 'Diplomats' Choice'.

⁴⁴ 'Doctors: Yushchenko was Poisoned', CNN.com, 11 December 2004, available online at <http://web.archive.org/web/20070218082557/http://www.cnn.com/2004/WORLD/europe/12/11/yushchenko.austria/index.html>, accessed on 20 November 2011.

diplomatic relationships that are far stronger than those without the presence of food.

1.4 Development and practice of Food Diplomacy

Food Diplomacy has, in recent years, become something of a trend among nations wanting to bring their cuisines and their cultures, to the world. The region in which the the largest part of the work has been done is South-East Asia, but there have been projects in other parts of the world, including South America, Europe and the United States. Apart from culinary nation-branding initiatives, there are other practical applications of Food Diplomacy. The Obama White House and administration have engaged actively with food initiatives, planting a garden on White House property as well as appointing the first American ‘Culinary Ambassador’. In Pittsburgh, Pennsylvania was born a unique restaurant concept called the Conflict Kitchen. This take-out café serves food only from countries with which the United States is in conflict, using food and creative design to teach its customers that our enemies eat just like Americans do. This concept of citizen Food Diplomacy embodies the perfect nexus of conflict resolution, diplomacy and contact theory. Finally, standing at the top of this idea is a group called the Club des Chefs des Chefs, a group of head chefs who serve heads of state. Just as summit meetings allow national leaders to share valuable policy input about their national position, a meeting of the Club ‘allows the chefs to explore the cultural ties and culinary traditions’ of their respective countries⁴⁵. The following section will show the current state of Food Diplomacy, and it will be followed by potential criticisms on the field and an outlook for the future.

⁴⁵ ‘About Club des Chefs’, available online at <http://www.webspawner.com/users/lechefssofstate/clubdesches.html>, accessed on 1 December 2011.

1.4.1 South-East Asian Food Diplomacy

The strength of a national Food Diplomacy programme is its use of soft power and cultural communication, which allow nations with less military, political, or economic strength to put their sign on the world around them. Bátorá writes that ‘for small and medium-sized states, public diplomacy represents an opportunity to gain influence and to shape international agenda in ways that go beyond their limited hard power resources’⁴⁶. As discussed above, cuisine can be an effective way to put under-recognized countries on the map, especially when the government initiates the project. This is exactly what has been happening over the past decade. So-called middle powers, mostly in South-East Asia, have initiated Food Diplomacy campaigns to lead their charge onto the world stage. The beginning of an internationally recognized use of Food Diplomacy took place in 2002-2003 when the government of Thailand launched a programme called ‘Global Thai’. The mission of the project was to increase the number of Thai restaurants in the world. When the programme was announced, *The Economist* suggested that more Thai restaurants would not just have economic effects, but that ‘it could subtly help to deepen relations with other countries’⁴⁷. The Thai government has also initiated the ‘Thailand: Kitchen of the World’ project. Run by the Foreign Office of the Government Public Relations Department, the campaign aims to teach about the history and practice of Thai cuisine both in Thailand and abroad, as well as to give a special ‘Thailand’s Brand’ certificate to Thai restaurants abroad that satisfy the criteria of Thailand’s Ministry of Commerce. This is multi-layered nation-branding, the government, in order to build up Thailand’s reputation, has encouraged more Thai chefs to open restaurants abroad,

⁴⁶ Józef Bátorá, ‘Public Diplomacy between Home and Abroad: Norway and Canada’, *The Hague Journal of Diplomacy*, vol. 1, no. 1, 2006, p. 55.

⁴⁷ ‘Thailand’s Gastro-Diplomacy’, *The Economist*, 21 February 2003, available online at <http://www.economist.com/node/999687>, accessed on 21 November 2011.

but in order to maintain a certain level of quality the government has also created a brand to certify restaurants. The programme has been wildly successful: from 5,500 restaurants at the launch of the campaign; to 9,000 by 2006; and to 13,000 in 2009⁴⁸. The Global Thai and Kitchen of the World programmes raise an obvious facet of Food Diplomacy that may challenge its status as a purely cultural and political pursuit. With the clear goal of increasing the number of Thai restaurants worldwide, the Thai government was making an economic move, more Thai chefs working in foreign cities to support exodus populations, purchasing Thai ingredients and thereby adding to the Thai economy. This aspect of Food Diplomacy is indeed present and it is a major driving factor for many of the national programmes of the Country. It is also an underlying factor in nation-branding, as discussed above. Economic motivation does not undermine the intercultural and diplomatic importance of the Global Thai programme, however, nor of any Food Diplomacy programme. With each new Thai restaurant, an unofficial embassy opens and a new opportunity for cross-cultural interaction is established. Seeing the success of Thailand's programme, the government of South Korea decided to follow a similar path. In a trope coined by Greg Rushford but popularized by Rockower, this was the birth of 'Kimchi Diplomacy'⁴⁹. In April 2009, the Korean government announced a US\$ 44 million programme called 'Korean Cuisine to the World', with a goal of making Korean food one of the five most popular ethnic cuisines in the world⁵⁰. The programme included the Thai goal of increasing the number of

⁴⁸ The Thai Government Public Relations Department, 'Thai Restaurants Promoted All Over the World', 26 July 2006; 'Popularity of Thai Food Overseas', 26 September 2006; 'Thai Kitchen to the World Project to Focus on the Principle of Creative Economy', 29 December 2009, available at <http://thailand.prd.go.th/>.

⁴⁹ Rushford tells a fascinating story of a 1967 meeting between US President Lyndon Johnson and South Korean Prime Minister Chung Il-Kwon, in which Chung confided in Johnson that Korean troops fighting in Vietnam were suffering from low morale as a result of being cut off from a supply of kimchi. He asked for support from the Americans, who came through with funds to keep the Koreans in kimchi for the remainder of the war. See Greg Rushford, 'Kimchi Diplomacy', April 2003, available online at http://www.rushfordreport.com/2003/4_2003_Publius.htm, accessed 21 November 2011

⁵⁰ Kim Hyun-cheol, 'Global Hansik Off to Strong Start', Korea Times, 26 April 2009, available online at http://www.koreatimes.co.kr/www/news/biz/2009/05/123_42711.html, accessed on 22 November 2011.

Korean restaurants abroad, as well as initiating cooking programmes at international cooking schools such as Le Cordon Bleu and the Culinary Institute of America, and the cultivation of Korean celebrity chefs. A kimchi institute was also inaugurated in order to create new types of the Korean staple. This programme, led by South Korea's Ministry for Food, Agriculture, Forestry and Fisheries, is ongoing, with future goals to standardize Korean cooking methods and dish names as well as to adopt a restaurant certification system like the 'Thailand's Brand' programme⁵¹. South Korea's Vice Minister of Food underscored the programme's intent by saying, 'Ultimately, the plan aims to offer more and better opportunities for people across the world to relish hansik [Korean food] and understand Korean culture'⁵².

This government-level diplomacy has been paralleled at the citizen level by an active Korean diaspora, who have covered the United States and other countries with new forms of Korean food, notably the Korean taco. This invention has become a fashionable new fusion food abroad, and has led more foreigners to enjoy Korean food than before. Rockowe cites this citizen diplomacy to criticize the Korean government's campaign:

*When public diplomacy actors pay attention to local and global public opinion rather than gluttonously engaging in advocacy, they are more adept at taking advantage of unorthodox openings created by authentic cultural innovations to carry out enhanced public diplomacy*⁵³.

⁵¹ 'Food: Sponsoring Food Industry Sponsorship', Korea Ministry website, available online at http://english.mifaff.go.kr/eng/list.jsp?group_id=1002&menu_id=1027&link_menu_id=&division=H&board_kind=&board_skin_id=&parent_code=1002&depth=1&tab_yn=N, accessed on 22 November 2011.

⁵² 'Global Hansik Off To Strong Start'.

⁵³ Paul Rockower, 'Korean Tacos and Kimchi Diplomacy', 25 March 2010, available online at http://uscpublicdiplomacy.org/index.php/newswire/cpdblog_detail/korean_tacos_and_kimchi_diplomacy, accessed on 22 November 2011.

This point shows the current level of debate in the still-nascent Food Diplomacy world: where and how should it progress? Should it take place at the formal, official level, or is it better left to the realm of citizen diplomats? Rockower suggests that a synthesis of the two would be ideal: government programmes working from the top, as well as supporting grassroots Food Diplomacy, would create a complete and effective campaign. The most recent national Food Diplomacy campaign is one that is being undertaken by the government of Taiwan. Taiwan is a unique case, as it is not a widely recognized Country, but a disputed territory and a “de facto” state. As such, traditional diplomacy is not as effective, for Taiwan is not a member of the United Nations and therefore does not have access to many means of conventional relations. As a result, Taiwan has worked to reach out through non-traditional means, including the use of Food Diplomacy. Taiwanese president Ma Ying-Jeou started a US\$ 30 million programme to initiate, in the words of *The Guardian*, a ‘diplomatic drive to differentiate the Country from its giant and sometimes antagonistic neighbor, China, and to end the perception that Taiwan is little more than the mass-production workshop of the world’⁵⁴. The campaign includes the government hosting international cooking competitions as well as sending Taiwanese chefs to contests abroad in an attempt to highlight the aspects of the cuisine that are different from the international view of ‘Chinese’ food⁵⁵. The government will also be creating a ‘culinary think tank’ to work with restaurants abroad to promote Taiwanese food. It is focusing special effort on bringing local Taiwanese cuisine to mainland China, in the hope of influencing the relationship between the two⁵⁶. Journalist Mark Caltonhill juxtaposes the Taiwanese campaign, which was launched on

⁵⁴ Robert Booth, ‘Taiwan Launches “Gastro-Diplomacy” Drive’, *The Guardian*, 8 August 2010, available online at <http://www.guardian.co.uk/world/2010/aug/08/taiwan-launches-gastro-diplomacy-drive>, accessed on 22 November 2011.

⁵⁵ Paul Rockower, ‘The Gastrodiploamcy Cookbook’, *Huffington Post*, 14 September 2010, available online at http://www.huffingtonpost.com/paul-rockower/the-gastrodiploamcy-cookb_b_716555.html, accessed on 22 November 2011.

⁵⁶ ‘Cooking a Prosperous Future’, *Taiwan Today*, 4 June 2010, available online at <http://www.taiwan.today.tw/ct.asp?xItem=105822&ctNode=425>, accessed on 22 November 2011.

the one-hundredth anniversary of the founding of the Republic of China (Taiwan), with the People's Republic of China's sixtieth anniversary spending campaign, which featured tanks, missiles and aircraft⁵⁷. Soft power versus hard power, and noodles versus nuclear arms: the distinction is clear and the path for middle powers to assert themselves on the world stage is set.

1.4.2 The United States' Initiatives

The United States recently appointed its first official 'culinary ambassador'. In September 2011, the ex US Secretary of State Hillary Clinton announced that José Andrés, a Spanish-born Washington DC-area chef, would be the first to hold the title. His role is as the United States' liaison with the Global Alliance for Clean Cookstoves, an international partnership that is working to bring new cooking technologies to the developing world. While this position does not fit directly within our definition of Food Diplomacy, it does indeed have a deep connection, and Andrés' role is a key link. He is a well-respected chef who has made his name in the cooking world through two decades of work in the nation's capital. With that goodwill, he believes that he can expand into promoting global development and ultimately world peace. The US State Department has embarked on an even more advanced Food Diplomacy initiative. In July 2012, the US Chief of Protocol, Ambassador Capricia Penavic Marshall, convened a gathering of chief protocol officers from almost one hundred countries. The first Global Chiefs of Protocol Conference aimed to bring protocol officers together to 'exchange knowledge and ideas, evaluate and enhance their craft, and strengthen the role of protocol in diplomacy'⁵⁸. Andrés, who was invited to speak at and cook for the meeting, touched on the

⁵⁷ Mark Caltonhill, 'Promoting Taiwan through its Food', American Chamber of Commerce in Taiwan Publication, vol. 41, no. 1, available online at <http://www.amcham.com.tw/content/view/3138/479/>, accessed on 22 November 2011.

⁵⁸ 'Ambassador Capricia Penavic Marshall to Launch Inaugural Global Chiefs of Protocol Conference', State Department website, 2 July 2012, available online at <http://www.state.gov/r/pa/prs/ps/2012/07/194418.htm>, accessed on 11 July 2012.

importance of commensality in diplomacy, and served a menu highlighting American cuisine from the past two hundred years⁵⁹. After the occasion, the ex Secretary of State Hillary Clinton spoke to The New York Times about the importance and power of private Food Diplomacy:

*Showcasing favorite cuisines, ceremonies and values is an often overlooked and powerful tool of diplomacy. The meals that I share with my counterparts at home and abroad cultivate a stronger cultural understanding between countries and offer a unique setting to enhance the formal diplomacy we conduct every day*⁶⁰.

Finally, the White House has also been doing its share of both private and public Food Diplomacy. First Lady Michelle Obama has led an outreach drive to both the American people and abroad with a campaign highlighting the importance of healthy and local food. Mrs Obama oversaw the planting of a garden at the White House that feeds the family and provides fruit and vegetables for state dinners, as well as installing a beehive to produce White House honey⁶¹. The White House kitchen, led by Executive Chef Cristeta Comerford, Pastry Chef Bill Yosses and the Obama-picked assistant Sam Kass, has been leading the effort for both domestic and international Food Diplomacy. State dinners are an especially key moment for outreach. Yosses says that the kitchen staff has a ‘very strategic system’ to go about planning for such an event⁶². Starting months in advance, the team identifies which fruits and vegetables from the garden will be in season at the time of the dinner. They then consult with the various departments involved in the planning, including the State Department, to establish what tone is desired for the

⁵⁹ Beth Kormanik, ‘International Protocol Chiefs Share Ideas at New DC Conference’, BizBash, 11 July 2012, available online at http://www.bizbash.com/international_protocol_chiefs_share_ideas_at_new_dc_conference/washington/story/23758, accessed on 11 July 2012.

⁶⁰ Marian Burros, ‘Diplomacy Travels on Its Stomach, Too’, The New York Times, 2 July 2012, available online at <http://www.nytimes.com/2012/07/04/dining/secretary-of-state-transforms-the-diplomaticmenu.html?pagewanted=all>.

⁶¹ Rachel Tepper, ‘The Obamas Eat from a Garden that Yields 1,600 Pounds of Food’, The Feast, 18 October 2011, available online at <http://www.thefeast.com/chicago/restaurants/The-White-HouseKitchen-Garden-Yields-1600-Pounds-of-Food-105187314.html>, accessed on 27 November 2011.

⁶² Bill Yosses, personal interview with author, Cambridge MA, 28 November 2011.

occasion. The meal is then constructed to reflect that tone, whether it is casual and comfortable or formal and proper. Yosses says that some of the input comes from the guests themselves, but that final menu planning is at the discretion of the kitchen. Comerford says that it is important to give a ‘nod’ to the guest’s home cuisine, but that the ‘menu has to be reflective of American cuisine and hospitality’⁶³. Each state dinner is therefore a combination of gesture and national pride, outreach to the other while maintaining a strong sense of self is the key to Food Diplomacy.

1.4.3 Food, Diplomacy and Conflict

Recalling the discussion above about contact theory, Food Diplomacy on a less official scale is ripe for being invoked in situations of conflict. Crofts illustrates the effect of food in bringing together conflicting parties by describing the work of food vendors in Khartoum, Sudan⁶⁴. Sudan’s capital has brought people together from all around the nation, including the region that is now the Republic of South Sudan. As these displaced people look for livelihoods, many end up selling food from their own regions. Crofts writes, ‘Making the best of a bad situation, these vendors [. . .] have inadvertently become culinary ambassadors. [. . .] They [. . .] facilitate a nascent sense of a shared Sudanese identity and nationalism’⁶⁵. The provincial nature of many of the cuisines that have been brought to the capital has an effect on the city’s usual residents. As urban Sudanese slowly overcome their preconceptions and discover a taste for regional cuisines, meals have the power to function as unofficial diplomacy during this turbulent time in Sudan’s history.’⁶⁶ Although it may not be a replicable model of conflict

⁶³ Cristeta Comerford, email correspondence with author, 30 November 2011.

⁶⁴ A.V. Crofts, ‘Silver Lining: Building a Shared Sudanese Identity through Food’, *Gastronomica: The Journal of Food and Culture*, vol. 10, no. 1, winter 2010.

⁶⁵ Crofts, ‘Silver Lining’, p. 110.

⁶⁶ Crofts, ‘Silver Lining’, p. 110.

resolution, this unheralded form of private Food Diplomacy does point to an alternative potential power of the tool. A more local and engineered version of public Food Diplomacy that is dealing with conflicts is a project by two restaurateurs in Pittsburgh, Pennsylvania. They have established a take-out restaurant known as the Conflict Kitchen, which only serves food from countries with which the United States is in conflict. The restaurant rotates its theme, focusing its energy on one conflict cuisine at a time. The first iteration, known as ‘Kubideh Kitchen’, served Iranian food, supplemented by community-supported events, performances and discussions⁶⁷. A Skype-linked dinner and conversation between diners in Pittsburgh and the Iranian capital, Tehran, was initiated to expose each population to the other’s culture and cuisine. The next two rotations, the ‘Bolani Pazi’ (Afghan takeout) and ‘Arepas Kitchen’ (Venezuelan takeout), have included similar outreach devices. While it is unclear how deep the effects of these culinary connections are, the project occupies a perfect space within Food Diplomacy: to utilize local and everyday food, like that which would be eaten on the street, from conflict countries and to use it as a basis for conflict resolution. Future forays into the myriad uses of Food Diplomacy should study this model and build upon it.

1.4.4 During Summit

At the top of private Food Diplomacy is a group called the Club des Chefs des Chefs, or the ‘Leaders’ Chefs’ Club’. Founded in 1977 by French designer Gilles Bragard, this is an informal organization bringing together the head chefs of various heads of state, that is, the chefs who cook for the world’s presidents, prime ministers and royalty. Summit diplomacy takes place at ‘the highest level of political authority’⁶⁸; summit Food Diplomacy therefore takes place at the highest level of culinary authority. Bragard’s motto for the club is ‘Politics divides men,

⁶⁷ More information available online at www.conflict-kitchen.org

⁶⁸ Berridge, *Diplomacy*, p. 161.

but a good meal unites them’⁶⁹. Annual meetings take place at rotating locations, allowing the chefs not only to compare notes with each other but to improve their connection with the host Country⁷⁰. The organization is highly secretive, however, and does not divulge much of what is discussed beyond the occasional summit menu. Discretion is essential, because as Buckingham Palace’s head chef Mark Flanagan fears, if he disclosed his boss’s preferences, ‘chefs would recreate it for her everywhere she went, she would be served it so many times that it wouldn’t be her favorite any more’⁷¹. More serious than losing a favorite dish, perhaps, would be if host chefs used such knowledge to sway a leader’s political position by tempting them with food. Comerford provides some insight into the workings of the club, saying that ‘We meet once a year to discuss, sharing experiences and know-how. When their Head of State visits the United States, or our President visits their Country, our knowledge of our leader sets us apart in terms of knowing and having first-hand information’. Perhaps this indicates that a little knowledge-sharing about favorite dishes does occur, and that the club does indeed grease the wheels of decision-making. De Callières’ writing on the value of food to relations among princes indeed remains true today, as the power of the plate continues to be influential at the highest level of political authority.

⁶⁹ Hugh Schofield, ‘The Culinary United Nations’, BBC News, 29 August 2003, available online at <http://news.bbc.co.uk/2/hi/europe/3191091.stm>, accessed on 27 November 2011.

⁷⁰ ‘About Club des Chefs’.

⁷¹ Angelique Chrisafis, ‘Club Provides Cooks’ Tour of World Leaders: Chefs des Chefs Gather to Discuss How to Spice up those Political Summits’, The Guardian, 14 July 2007, available online at <http://www.guardian.co.uk/world/2007/jul/14/france.lifeandhealth>, accessed 27 November 2011.

CHAPTER II

2.1 EXPO Milano and its Legacy

In the previous chapter became familiar with the topic and briefly analyzed the Food Diplomacy programs undertaken by some nations. Now we will analyze how Italy has taken action in this field. One of the first things foreigners have always associated to Italy is its excellent cuisine and its unique dishes and products. A nation where one always eats fresh, tasty and inimitable products. A lot of tourism from abroad is in fact often food tourism and Italy has always made a national identity, excellence and pride of its cuisine. For these reasons, the development of a real Food Diplomacy and promotion of Italian cuisine seems an obligated road for our Country, and indeed for some years now we have been moving in this direction, but the most significant turning point, and at the same time a world stage, for Italy was the Milan EXPO 2015. A success easily deduced from the numbers derived from studies of Coldiretti / IRE: 88 percent of national visitors were satisfied, spending a total of 2.3 billion that to achieve this goal. Throughout the six months it was visited by 21.5 million people, of whom about 6.5 foreigners according to organizers. It was a result record for attendance, degree of appreciation of the citizens and results for the Country with 300 institutional visits, the presence of 60 Heads of State or Government and twenty thousand employees and volunteers involved in the site animated by 140 participating States, of which 54 with their own pavilions other than the 70 in the nine clusters, but also three international organizations. For three out of four Italians (74 percent) the experience of Expo can be considered a success of our Country while 16 percent remains indifferent, only 7 percent considered it a failure, and 3 percent 'does not know'.

The dimension of the event was also determined by the attendance and the illustrious interventions, among which the most significant of all was considered to be the attendance Pope Francis at the opening of the

event by 42 percent, followed by the visit of Michelle Obama with 22 percent and by the intervention of the UN Secretary-general Ban Kim Moon. For the 49 percent of the visitors the most memorable moment was by far the lighting up of the tree of life, exceeding the festivals dedicated to single products (fruits, milk, ice cream, beer) chosen by 23 percent, the presence of young people from around the world with Slow Food (16 percent) and the meeting of thirty thousand of the Coldiretti farmers with the president Matteo Renzi determined by 15 percent. Italians spent a total 2.3 billion to visit the whole Expo in travel, accommodation, and other expenses, entrance and Expo food and drink, of which 570 million for eating. Less than half of the visitors (47 percent) considered it too expensive in hospitality (bars, restaurants, fast food and street food). A majority of 32 percent chose an exclusively Italian cuisine, 25 percent only the foreign, 34 percent have tried both the foreign than Italian while 9 percent, according to the survey, 'does not remember'. Japan is on the podium with 21 percent of the vote, followed by China with 9 percent and Kazakhstan with 8 percent. UAE and Israel both were also both appreciated by 7 percent.

As far as the most liked Italian pavilions are concerned, ranking at the first place was 'Palazzo Italia', with 26 percent, followed by Perugina with 15 percent, by Coldiretti with 12 percent and by Coop and Eataly with the 11 percent. Pavilion Zero was very much appreciated by 21 percent of the visitors. Queues were long, indicated by 73 percent of visitors as the main downside, are actually a measure for the Expo's success. The most critical problems reported by visitors is the excess of virtuality indicated by 34 per cent, while for 17 per cent it is the presence of only free areas for resting, however overall judgment appears very flattering⁷². 'We were among the first to believe and invest in the Expo with the early choice to sponsor the symbol, the Tree of Life, animating everyday our 'No farmers no party' pavilion with the

⁷² Official datas by Coldiretti; <http://www.coldiretti.it/News/Pagine/783-%E2%80%9331-Ottobre-2015.aspx>.

participation of farmers from all regions of Italy, said the president of Coldiretti Roberto Moncalvo. 'A decision that was rewarded with recognition of the many enthusiastic visitors, but also the conviction that the Expo has helped to restore the dignity and value of working in the fields where 570 million companies worldwide are involved and are now closer to the ambitious objectives that were set at the opening: 'Feeding the Planet, Energy for life'.

The leading role of Italian farmers and was one of the key factors of the Expo because it allowed the reality of the Italian Countryside where the world success of Made in Italy food products are born tangible to the visitors. These are surely very important data and numbers, which alone give an idea of the success that has been EXPO Milan for Italy. Just as important as mentioned by the president of Coldiretti, was the participation of Italian farmers who, always ensuring the quality of local products, employ advanced techniques to grow, but at the same time taking care of the quality of the product and seeking to ensure that the use of land is not polluting it or harmful for the territory. It can be said that the theme of the EXPO 'Feeding the Planet, Energy for Life'⁷³, viewed worldwide as very innovative, is based on the desire to treat technology, innovation, culture, traditions and creativity linked to the food sector and food, which has always been done in Italy. These issues had already been developed in previous editions of the event (such as the water theme of the Expo Zaragoza 2008), this edition aimed to bring them up in the light of new global scenarios and new problems, focusing mainly on the right to healthy, safe and sufficient nutrition for all the inhabitants of the Earth. This theme was chosen for the concern about the quality of the food but also to reflect upon food education and on world hunger. These concerns already raised by MIT studies for the Club of Rome had been neglected in times when it seemed that the increase in available resources was greater than the increase in consumption. The rapid re-absorption of agricultural surplus was enough for the problem of

⁷³ Official site Of EXPO Milano 2015 <http://www.expo2015.org/>.

how to Feed the Planet and avert hunger to be raised again. As read on the official site of the event, the primary objectives of Expo 2015 were:

- To strengthen the quality and security of food, ie the security of having enough food to live and the certainty to consume healthy food and drinking water;
- Ensure healthy and quality food to all human beings to eliminate hunger, thirst, infant mortality and malnutrition that afflict 850 million people on the planet, abolishing famine and pandemics;
- Preventing the new social diseases of our time, including obesity, cardiovascular diseases, from tumors to more common diseases, enhancing the practices that allow the solution of these diseases;
- Innovation through research, technology and enterprise of the whole food production chain, to improve the nutritional characteristics of products, their storage and distribution;
- Education in proper nutrition and encouraging more healthy lifestyles, especially for children, adolescents, the differently able and the elderly;
- Enhancing the knowledge of "food traditions" as cultural and ethnic elements.

During the months of the Expo, issues related to the technologies applied to the food sector were also addressed, focusing in particular on:

- Preserving biodiversity, respecting the environment as agriculture ecosystem, protect the quality and safety of food, education in nutrition for a person's health and well-being;
- Identify the best tools for control and innovation, from biotechnologies that do not represent a threat to health and the environment, to ensure the availability of nutritious and healthy food and water for drinking and irrigation;

- Ensure new food sources in areas of the world where agriculture is not developed or is threatened by desertification of land and forests, from drought and famine, impoverishment of fish in rivers and seas.

Great importance was also given to the value of food as a cultural expression and socialization vehicle, in addition to issues related to agricultural production, catering and research centers; particularly the Expo debates will cover:

- the value of innovations and production technologies that generate a healthy food product;
- the presentation of techniques concerning the preparation and storage of food, increasing the professional skills and improving communication with the consumer;
- ensuring the quality of food with appropriate systems of protection and monitoring of counterfeiting and adulteration⁷⁴.

It is in the spirit of respecting these issues and at the same time to develop and promote Italian cuisine abroad, that the first steps that subsequently lead to the development of the 'Food Act' and a series of protocols and initiatives to promote the Italian culinary culture abroad were born. We will now analyze the various policies adopted in recent years.

⁷⁴TeG TEMA, 'Guida del Tema EXPO Milano 2015' EXPO Milano S.p.A. and Thematic Spaces, Milano 2012 http://www.expo2015.org/archive/cs/Expo/1392223970683/Guida%20del%20Tema.pdf%3bfilename_%3dUTF-8%27%27Guida%20del%20Tema.pdf.

2.2 The Extraordinary Italian Taste

The first and most significant act carried out by the Ministry of Food Farming and Forestry Policies was definitely the presentation on May 27, 2015, held at EXPO Milan, a unique hallmark for Italian food and agricultural productions: 'THE EXTRAORDINARY ITALIAN TASTE'. This brand serves to promote Made in Italy food, under a single banner, and contrast the Italian sounding. A logo that will be used at international fairs, in promotional activities within the sale of the large foreign distribution points, in the communication and promotion campaigns on TV, on traditional media, on the Internet and on social media. A single sign useful for vehicular unitary idea of Made in Italy by the original and distinctive quality features. In exhibitions, for example, it serves to characterize uniquely the exhibition area dedicated to Italy food and wine. The brand will be used right from within the next few days of the Wine and Food Pavilion Pavilion at Expo, just to seize the unique opportunity of visibility offered by the event in Milan⁷⁵.

Dealing mainly with a countrywide operation system, giving Italy the chance to catch up with competitors in countries that already use these types of symbols successfully. Thus the aim is to strengthen the measures undertaken by public or private companies in foreign markets, such as the US, Canada, Brazil, Russia, India, China, Europe, Turkey and Australia. The sole symbol is represented by an Italian flag with three waves that evoke the concept of growth and development and by the wording 'THE EXTRAORDINARY ITALIAN TASTE'. 'From today, Italian agricultural food - said the Minister Maurizio Martina - will be stronger and more recognizable on international markets. We finally have a unique distinctive symbol that will help consumers and operators to

⁷⁵ Ministero degli Affari Esteri e della Cooperazione Internazionale (2016). *The Extraordinary Italian Taste: Prima Settimana della Cucina Italiana nel Mondo 21 – 27 novembre 2016*. Retrieved from Esteri: http://www.esteri.it/mae/resource/doc/2016/10/concept_it_primasettimana_cucina_italiana_mondo.pdf

immediately identify the promotional action of our products. Starting from Expo Milano 2015 to take advantage of this extraordinary opportunity for visibility and we will continue with implementations provided by our internationalization plan on strategic markets. Over the next three years we will invest over 70 million Euros for promotion, whilst acquiring team spirit and not dispersing our resources in a thousand streams. With the unique symbol we want to achieve worldwide recognizability, creating a common thread that joins all promotion of the real Italian product on the international scene.'

'Our goal is to be at the side of the companies that in recent years have invested energies, know-how and passion, companies that have enabled Italy to record a growth of 70% in agricultural food exports in the last 10 years. We closed 2014 with 34.4 billion euro, in the first quarter of 2015 we reached over 8.7 billion Euros and our aim is to reach 36 billion by the end of the year. Furthermore, making the most of Milan World Expo can we can aim toward a peak of 50 billion exports in 2020'⁷⁶. The brand which is part of a wider extraordinary Made in Italy internationalization plan, developed in collaboration with the Ministry of Foreign Affairs and International Cooperation (MAECI), the Ministry of Agriculture Food and Forestry Policies (MIPAAF) and the Ministry of Education, University and Research (MIUR), constitutes one of the most important aspects. The sole brand, finally, due to its characteristics of use will not be affixed to individual products. This protocol is part of the project known as 'Food Act' who wants to be a massive project of Food Diplomacy by Italy based on some basic assumptions such as the recognition by UNESCO in 2010 of the Mediterranean diet as Intangible Cultural Heritage humanity and that this recognition is linked to many important studies conducted in Italy and abroad, with particular regard to the beneficial health effects of this diet. Another essential factor that is

⁷⁶ Ministero delle politiche agricole alimentari e forestali (2015, May 27). *Made in Italy, Mipaaaf: presentato segno unico distintivo agroalimentare "The extraordinary italian taste"*. Retrieved from Politiche Agricole: <https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/8687>

linked to the Mediterranean diet and especially the top quality product based Italian cuisine, is that they are increasingly an extraordinary worldwide opportunity for recognition and promotion of the image, tradition and the creativity of our Country. The 'Forum of Italian cuisine' has also been constituted as a permanent instrument of work and comparison of the high national kitchen experiences and the main institutions involved. On this basis the collaboration between the three Ministries, MIUR, MAECI and MIPAAF have drafted the articles of the 'Memorandum of Understanding for the international promotion of the Italian cuisine'. Article 1 of the Protocol speaks of the same objective, namely the enhancement of quality Italian cuisine in the world with a training program, and international promotion in priority countries, shared among the various ministries⁷⁷.

Article 2, on the other hand, implements the program by dividing it into several different actions, these will be briefly analyzed and reported.

1- The program will be developed in synergy with the extraordinary internationalization plan promoted by the Government. In implementing the program MAECI, MIPAAF and MIUR will promote collaboration with the Ministry of Economic Development (MISE), the Agency for the promotion abroad and the internationalization of Italian firms (ICE), the National Olympic Committee Italian (CONI), the Association of Italian Chambers of Commerce (Unioncamere), the Association of Italian Chambers of Commerce abroad (Assocamerestero) and other institutions in relation to the specific actions envisaged.

2- The promotion activities will make use of collaborations with Italian Chefs, now ambassadors of Italian cuisine in the world, who will

⁷⁷ Ministero degli Affari Esteri e della Cooperazione Internazionale, Ministero delle politiche agricole alimentari e forestali and Ministero dell'Istruzione, dell'Università e della Ricerca, 'Protocollo di Intesa per la valorizzazione all'estero della cucina Italiana di Qualità' Roma, 15 March 2016, Retrived from: file:///C:/Users/330/Downloads/News%202016-11-08%20protocollo_d_intesa_cucina.pdf.

be involved in the actions foreseen with procedures established by the Working Group referred to in Art. 3⁷⁸.

3- The MIUR will implement the training program with the assignment of specific scholarships for young Italian Chefs under 30, aimed at postgraduate internships and summer internships abroad and a Master in Business Administration in the fields enogastronomy and farm & food. The Ministry of Education, with the collaboration of the University of Wine and Food Sciences in Pollenzo, will ensure the selection of young Chefs and will co-finance with universities and research institutions interested in 50 annual fees to the amount of EUR 20,000 each in the 2016-2018 triennium. scholarships awarded during the term of this Memorandum of Understanding will also end after the expiry of the same.

- The unique symbol for 'The Extraordinary Italian Taste' agricultural productions and products will identify all the activities implemented.

- The MAECI, in agreement with the other institutions concerned, will coordinate the international promotion program for the biennium 2016-2017, by focusing interventions on priority countries such as United States, Japan, Peoples Republic of China, the Russian Federation and the United Arab Emirates.

- For each of the priority countries, the Working Group referred to in Art. 3, will define initiatives, resources and operational areas that include: the organization of High Italian Cuisine Master classes in the cities of New York, Boston, Miami, Houston, Chicago, Los Angeles, Moscow, St. Petersburg, Dubai, Tokyo, Beijing, Shanghai, aimed at foreign chefs, to spread the values of the Mediterranean diet, promoting knowledge of Italian Wine and Food production, and develop skills of workers in this sector. It also aims to take action on relevant

⁷⁸ MAECI, MIPAAF and MIUR 'Protocollo di Intesa per la valorizzazione all'estero della cucina Italiana di Qualità'

information on Italian food and wine culture, through special partnerships with TV, radio, social networks and social media. The organization for the 2016-2017 biennium of the 'Italian cuisine in the world week' to be held under the coordination of MAECI. Finally, the implementation of training activities by 'influencer' foreigners in Italy on PDO and PGI products.

- The Working Group referred to in Art. 3 will support the organization by CONI, in agreement with the other institutions concerned, of special promotional events of quality Italian cuisine, called 'The Italian days', during the period of international sporting events, starting with the Olympic Games of the XXXI Olympiad in 2016 in Rio de Janeiro.

- MAECI will involve in the activity of the 'Food Act' and in the activities under the memorandum of understanding of the diplomatic-consular network and other Italian cultural institutes abroad.

- In the light of demands that emerge during the implementation of this Memorandum of Understanding, the Working Group referred to in Art. 3 will integrate the list of priority countries under point 5 and cities in point 6⁷⁹.

Article 3 provides for the performance of tasks provided for in Art. 2 and for the monitoring and verification of the results of the Programme, establishing a Working Group formed by representatives of MAECI, MIPAAF, MIUR, MISE, ICE, CONI, Unioncamere, Assocamerestero. The Working Group will be coordinated by MAECI in regards to the international promotion program and by MIUR regarding the training program. In response to specific needs, the Working Group may decide

⁷⁹ MAECI, MIPAAF and MIUR 'Protocollo di Intesa per la valorizzazione all'estero della cucina Italiana di Qualità'.

to include representatives of the world of quality cuisine and other stakeholders⁸⁰.

Article 4 concerns the financial burden of the Memorandum of Understanding. The signatories of the Protocol undertake to identify their items of expenditure the funds necessary for their actions foreseen by the program to be implemented in collaboration with other entities referred to in Art. 2. For the implementation of the Memorandum of Understanding the signatory Ministries may enter into agreements with ICE-Agency, Unioncamere, Assocamerestero and CONI⁸¹.

On the other hand, in the fifth article the duration of the Protocol is determined, establishing it for a period of 24 months from the date of its signing and renewals or tacit permit extensions will not be allowed⁸².

Finally, in the sixth and final article, changes to the text are regulated, providing the opportunity for the parties to concur exclusively in written form. As one can tell from what has been said until now, the idea behind the protocol is to let international consumers get to know Italian products and how they are grown and processed. Too often people peddle recipes, dishes or ways to cook certain dishes as 'Italian' exploiting the great fascination of the concept of Italian cuisine held in one's imagination. Often many Italian dishes are cooked, not only with non-Italian products, but with errors both in recipes in the dish assembly. One of the most common and simple examples is the fact that many foreigners put pasta in the water before it reaches boiling point, quickly leading on to more relevant examples such as many people or sites on social networks posting videos of preparing 'Italian' dishes using wrong or poor quality ingredients. Upon these points the MAECI Food Act will

⁸⁰ MAECI, MIPAAF and MIUR 'Protocollo di Intesa per la valorizzazione all'estero della cucina Italiana di Qualità'.

⁸¹ MAECI, MIPAAF and MIUR 'Protocollo di Intesa per la valorizzazione all'estero della cucina Italiana di Qualità'.

⁸² MAECI, MIPAAF and MIUR 'Protocollo di Intesa per la valorizzazione all'estero della cucina Italiana di Qualità'.

have considerable impact as mentioned in Art. 2 point 8, as it combines many points of protocol, but it deepens and amplifies others⁸³.

⁸³ MAECI, MIPAAF and MIUR 'Protocollo di Intesa per la valorizzazione all'estero della cucina Italiana di Qualità'.

2.3 Food Act

The Food Act is a plan of action of the Government for the promotion of Italian cuisine presented by Minister of Agricultural policies Maurizio Martina Agriculture at the Expo in the second Forum of Italian cuisine in the presence of more than 40 most renowned chefs in Italy and Ministers of Education, University and Research Stefania Giannini, of Heritage and Cultural activities and Tourism Dario Franceschini. In order to achieve the objectives of the plan, the Forum of Italian Cuisine is set up as a permanent working organization and a comparison between the experiences of Italian haute cuisine and the main institutions. The Forum will be coordinated by the Ministry of Agricultural Food and Forestry Policies, and will meet at least three times a year. The meetings will be attended by the Ministry of Foreign Affairs, the Ministry of Heritage and Cultural Activities and Tourism, the Ministry of Economic Development, the Ministry of Education, University and Research, the Ministry of Labour and Social Policies, the Conference of Regions and autonomous Provinces, ANCI, operators and other entities and public organizations interested in the matter. The Food Act states the first actions of feasible systems coordinated by the institutions in synergy with the main players of the Italian food and wine experience. In relation to every action a main subject has been identified with specific focus and dedicated working groups. The following are the first ten actions of the Food Act⁸⁴.

⁸⁴ Rassegna, L. (n.d.). *Anche il cibo ha il suo "Act". Ecco le prime dieci azioni*. Retrieved from La Rassegna : http://www.larassegna.it/2015/07/29/anche-il-cibo-ha-il-suo-act-ecco-le-prime-dieci-azioni/?upm_export=pdf

- AMBASSADOR CHEFS OF ITALIAN CUISINE IN THE WORLD

Objective: promotion on foreign markets coordinated with the Government internationalization plan, identified with the unique symbol "The Extraordinary Italian Taste". Bringing the agricultural food exports to touch 50 billion euro by 2020 . In this context, the involvement of the main Italian chefs to promote the Country in high representative value events is foreseen. Specific focus on the US, Russia and China⁸⁵.

- ENHANCE THE ITALIAN EXCELLENCE AND THE MEDITERRANEAN DIET

Objective: To strengthen the awareness of the potential of the Italian agricultural heritage. Involve International influencers for the construction of a coordinated message. Promote the knowledge of Italian agricultural food excellence, in particular those recognized by the public protection systems (PDO, PGI and organic), through a use in cuisine that is also attached to the values of the Mediterranean Diet, highlighting at the same time the difference with Italian sounding products⁸⁶.

- ENHANCEMENT OF THE DISTRIBUTION OF THE REAL MADE IN ITALY FOOD AND AGRICULTURE

Objective: to promote the activation of distribution and logistics platforms as an essential tool to increase the size and competitiveness of businesses. The key issue is to ensure a better supply of foreign raw materials actually from Italy, especially the Italian restaurant networks in the world⁸⁷.

⁸⁵ Ministero delle politiche agricole alimentari e forestali 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana' 28 July 2015, Retrived from: <https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/8956>.

⁸⁶ MIPAAF 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana'

⁸⁷ MIPAAF 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana'

- HAUTE CUISINE, HIGHER EDUCATION

Objective: regarding the educational aspect it is necessary to bridge the gap of the system, focusing on the development of economic and entrepreneurial skills. Strengthening the existing sectoral training institutes and setting up new further specialized ones is one of the Food Act's priorities⁸⁸.

- EXTENSION USE OF INTERNSHIPS FOR QUALITY FOODSERVICE

Objective: Aiming to overcome the constraints of the existing legislation through a review of the guidelines in the field of training approved by the Conference of State that set quantitative limits on the number of trainees in relation to the number of employees of individual companies, without any differentiation in respect to the incidence of the training experience⁸⁹.

- INCREASED MERGING IN INDUSTRY AND FOODSERVICES

Objective: The plan will support the merging in the industry through business networks using tools such as the proposed tax credit with "Campolibero". Its extension to companies operating in the foodservice sector, ensuring compatibility with the European legislation on State aid and the fact that it comes to businesses, typically micro and small, operating in commerce whose sole responsibility is of Regions⁹⁰.

⁸⁸ MIPAAF 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana'

⁸⁹ MIPAAF 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana'

⁹⁰ MIPAAF 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana'

- GIVE CREDIT TO THE YOUNG ITALIAN CUISINE

Objective: One of the key points is about the development of feasible credit instruments that meet the specific needs of the high-quality foodservice sector. Facilitating, in accordance with the Regions, facilitated credit conditions promoted towards people aged under 40, in possession of particular requirements, to take over the foodservice companies for the cuisine generational change⁹¹.

- STRENGTHEN COMBINATION OF QUALITY FOODSERVICE - TOURISM TO PROMOTE THE REGIONS

Objective: Connect the wine and food offered on quality tourist routes, promoting regional agricultural food products, emphasizing also connections with the local quality foodservices, hospitality and cultural tourism. With this goal support and coordination tools will be identified to strengthen the tourism offer in a cultural - landscape - food and wine key⁹².

- CERTIFIED ITALIAN HAUTE CUISINE

Objective: In order to give value to Italian quality cuisine, recognition guidelines will be evaluated, to provide a guarantee to the consumer, and allow an industry-oriented development of regional quality promotion policies, transparency, uniqueness of products⁹³.

- ITALIAN CUISINE AS CULTURE, IDENTITY, EDUCATION, INCLUSION

Objective: The aim is to highlight the link between food and culture, identity, education and inclusion. This action provides for the promotion of widely ranging initiatives: from food education in schools, for the

⁹¹ MIPAAF 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana'

⁹² MIPAAF 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana'

⁹³ MIPAAF 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana'

promotion of values such as environmental sustainability, the fight against waste, food appreciation, to the cultural enhancement of the new Italian cuisine. The last point is also dedicated to creating accessibility for the most vulnerable, giving continuity to projects of assistance to those in need⁹⁴.

2.4 The first Week of Italian Cuisine in the World

Quality, identity, excellence. Three key words of the first 'Italian Cuisine in the World week', a legacy of Expo Milano 2015, to support the agricultural food business and industry professionals who elevate Italy's name abroad. The project is included in the action plan which deals with the Ministry of Foreign Affairs and International Cooperation, the Ministry of Agricultural Food and Forestry Policies, the Ministry of Education, in collaboration with the Ministry of Economic Development. A process that began on March 2nd , 2015 at Universal Expo with the first forum of the Italian cuisine, which was followed by the signing of the Food Act - the first pact between institutions and the world of cuisine - July 28th , 2015 and the Memorandum of Understanding for the promotion of quality Italian cuisine abroad signed at the foreign Ministry on March 15th, 2016⁹⁵.

The Italian Cuisine in the World Week is an annual event on Italian culinary tradition abroad and intends to express levels of qualitative excellence. Cuisine is one of the essential components of Italian identity and culture, as well as one of the main symbols of the Italian brand. These are the conditions that inspired the establishment of the Week:

⁹⁴ MIPAAF 'Forum cucina italiana a Expo: presentato Foodact, piano di azioni per la valorizzazione della cucina italiana'

⁹⁵ Il Sole 24 Ore. *Intervista a Paolo Gentiloni e Maurizio Martina "Una settimana per valorizzare la cucina made in Italy"*. Retrieved from Eventi sistema paese: http://eventisistemapaese.esteri.it/Eventi/cucinaitalianamondo/pdf/Gentiloni_Martina_ITA.pdf

Integration of the Week activities with the Extraordinary promotion of Made in Italy Plan, also with reference to the strengthening of the distribution network of the true Italian food;

Attention towards tradition, craftsmanship and innovation of which the chefs and sommeliers are the foremost artists;

Enhancement, for tourism, of regions and food and wine tours;

Internationalization of Italian cuisine, through specialization activities of young Italian chefs abroad and presenting an offer quality of Italian foodservice's;

Sharing of values of the Mediterranean diet nutritional model ;

Presenting the offer of Italian training in the wine and food industry also with reference to economic and managerial know-how, to attract talent from abroad and their loyalty to use high quality Italian products;

Promoting awareness of Italian food and wine production, in particular those recognized by public protection systems (PDO, PGI, organic, DOCG, DOC, IGT, etc.);

Cuisine as solidarity, understanding and dialogue between peoples, social inclusion and food education in schools.

The MAECI has set up, in close collaboration with the MIPAAF, a team project involving all public and private roles who, for various achievements, represent the high-level Italian cuisine and Italy in the world: from institutions (MISE and ICE Agency, Ministry of Education, MIBACT and ENIT, Regions) to relative associations, from cooking schools to the networks of certified Italian restaurants, from major design groups to operators in the food and wine sector. The main players were, in fact, the Italian cooks, from world-class chefs to young students of cooking schools, their worldwide collaboration was essential to animate the high value representative events. The main landmark of the planned

activities is the overseas network of the Foreign Ministry: 295 locations, diplomatic-consular and Italian cultural institutes, which coordinate the efforts of various players of the Italian system to optimize the use of resources, reach critical mass and ensure coherence. Over 1300 events that promote quality Italian cuisine: seminars on food sustainability and certification, meetings with chefs, presentations of recipe books, tastings and dinners, commercial promotional events, cooking classes, sports nutrition conferences, interior decoration fairs, design exhibitions, promotions of touristic routes, communication initiatives with particular reference to social media. A particularly relevant part is the cultural aspect, many events feature films and documentaries related to food, conferences on the history of cooking, concerts, language courses, photography exhibitions on the theme.

More specifically:

- 173 conferences, meetings with chefs and debates on the Italian culinary tradition;
- 98 promotional events organized in collaboration with the local Italian restaurants and major trade fairs;
- 151 show cooking and master classes;
- 334 themed events dedicated to the discovery of Italian flavors;
- 23 competitions and awards for quality Italian cuisine;
- 32 scientific-technical and academic seminars;
- 390 films and documentaries, theater performances related to the topic of food;
- 32 design exhibitions, art and photography dedicated to cuisine⁹⁶;

⁹⁶ Ministero delle politiche agricole alimentari e forestali and Ministero degli Affari Esteri e della Cooperazione Internazionale 'Prima settimana della cucina italiana nel mondo: dal 21 al 27 novembre

The Italian Cuisine in the World week took place between November 21st and November 27th, 2016 and ended with a great success for our Country. In every Country there was a numerous citizen membership and participation who were attracted and intrigued by the events in the program, thus being able to learn more about the Italian cuisine, how to recognize the authentic dishes and recipes from the fake and who were able, with ease, to enjoy the food prepared by our chefs, simultaneously learning to prepare them themselves, reminding them of all this agriculture behind a plate, from the cultivation and control of materials up until plating. Every event, from the slots in television shows, to tastings and courses and the widespread use of locations and the diplomatic network has allowed the made in Italy, not only to make its way into the hearts of the citizens of these 105 countries, but has also allowed Italy to export and to convey the philosophy and culture that lies behind our cuisine, the differences between regions, the meanings of the dishes, the reasons of using certain raw materials rather than others, to the innovation in the use of new environmentally friendly technologies that take care not to damage the environment and the importance of biodiversity and crops throughout Italy. This was just the first event of this type held so far, and given the enormous success and following achieved, the will is that this event is not simply repeated, but expanded and enhanced both in terms of reaching new countries that on this occasion were not involved, and in regards to the number of initiatives. This type of event allows you to set in motion processes that will be visible in the long run and it is this that Italy must aim for. Short term projects and policies tend to prove themselves a large failure in the long run, and the losses that have taken place, both in the economic sphere, but also in the field of international credibility, have been enormous. And it is precisely the scope of the international credibility on which we must focus. In a world like ours to have a good image, inspire trust or ensure

that one's first thought when thinking of our Country is a positive thought automatically predisposes people to relating better with us, to have more trust and this invariably leads to intensification of trade and diplomatic exchanges between countries. The effects of this first week will surely have an effect on exports of Italian products, which will increase, thereby enriching the whole production that revolves around food. Even the culinary tourism in our Country could benefit from it, in fact definitely more than propose Italian food abroad, a new interesting point upon which to focus a hypothetical new Italian Cuisine in the World Week would be to entice citizens of other countries to visit our Country by making the most of their passion for our cuisine, creating custom programs or packages for a real culinary vacation. Another aspect not to be underestimated is the promotion that is done both of the schools and of the Italian chefs who will therefore find more job opportunities and better job offers. In conclusion we can say that given the huge success of this event, and while having endless possibilities of development, pursuing this path must be a fixed point of any future policy on this topic.

CHAPTER III

3.1 What is Biodiversity?

Biodiversity is defined as a variability among living organisms including diversity inside species (genetic diversity), among the species and relating to ecosystems. These are usually the so called three levels of biodiversity. The debate on biodiversity matters on a global scale, from the identification to the protection, from the preservation to the exploitation, is wide open. The sequence of meetings to create regulatory measures, not so many indeed, ended up to the signing of international agreements. This allowed a clarifying and unambiguous way of identifying what biodiversity is inside the agreeing countries and inside the countries members of the EU.

In Italy a National Agricultural Plan was issued in 2008 by the Ministry for Agricultural Policies and in 2009 was established a Working Group on Agricultural Biodiversity (GLBA) which issued the guidelines for the preservation and characterization of Agricultural Biodiversity on plants, animals and microbial sector. At an international level, FAO and Biodiversity International (once IBPGRI), both with headquarters in Rome, but globally at the highest rate involved, are probably the institutions which made the greatest effort in order to bring back the debate and the concern to the subject of Biodiversity within an aim of concreteness and precise goals⁹⁷.

Talking of plant biodiversity, we need to specify that the terms we most use nowadays include definitions not always clear and unambiguous for a general audience. That is why the debate on the subject concerning biodiversity, and particularly what we call agro-biodiversity, is most recent and has not undergone a so thorough process

⁹⁷ Fao News article 'Genetic diversity of livestock can help feed a hotter, harsher world' retrieved from: <http://www.fao.org/news/story/en/item/380661/icode/>

that a unique and unmistakable definition can be reached. Following some definitions about plants.

WILD SPECIES

Species not undergone a domestication process (for instance many medicinal, forest and fodder plants), directly or indirectly, actually or potentially useful.

WILD RELATIVES

Species near to the nurtured ones, including either the direct ancestors whence the domestication of nurtured forms left, or other nearer species which can be used in genetic enhancement plans by means of crossing.

ECOTYPE

It's a spontaneous population fit to a specific environment (usually geographically limited) not depending on human intervention (which is instead decisive in the local variety).

LOCAL VARIETIES, LANDRACES, FARMER'S VARIETIES, FOLK VARIETIES

A local variety of a crop which breeds through seeds or through vegetative propagating is a variable population, anyhow identifiable, having usually a local name. It was not taken into an organized program for a genetic enhancement, it is characterized by a specific ability to adapt to environmental conditions in order to be grown in a specific area and it is close associated to the knowledge, habits, dialects and occasions of the human population which has developed it and keeps its breeding.

BRED VARIETIES

They result from specific enhancement plans carried out by varieties founders. They are homogeneous populations, often made up by a unique genotype. (pure lines, simple hybrids, clones)⁹⁸.

Biodiversity provides agriculture basis through keeping a persistent variability inside the species and thanks to genetic variability kept along the development of crops and livestock. Agricultural biodiversity is a term including all biodiversity elements which, more specifically, are important for food and agriculture. In short, all that has a real interest in the agricultural department, either for crops or livestock, and which is used by the human beings as food. That is defined as agro biodiversity.

Biodiversity: Different agro-ecosystems;

Agro biodiversity: Different species;

Different populations

Different genotypes (that is human action)

As we said above, agro-biodiversity includes plant and animal species, and the varieties and the races within, and includes also those components supporting agricultural productions. To that effect, all the components which as species are capable of supporting the ecosystem through active services affecting the breeding or growing environment of species and races are meant. Earthworms and fungi contributing to the supply and influencing plant nutrient cycles through organic substances composition and decomposition. In recent years dramatically interesting seems to be the fact – and Italy has taken the lead role in this respect – that are included in the matter on biodiversity also subjects and themes concerning native microbial species gaining more and more attention

⁹⁸ Francesco Sottile, 'La biodiversità agraria: basi di partenza ed evoluzione del contesto', retrived from http://www.scienzattiva.eu/wp-content/uploads/2014/10/STAB_A_Biodiversita-agraria_SOTTILE.pdf

especially in terms of yeasts involved in native traditional agricultural and food products.

According to FAO, 7.000 plant species approximately have been grown up by human beings who from nomads became settlers with a limited interest for hunting and starting a brand new residential agricultural activity. However, nowadays, only 30 crops supply approximately 90% of the world food energy needs; among these, wheat, rice and corn supply by themselves roughly half of the globally consumed food energy. Up to these studies, among the ca. 15.000 mammals and birds, only 30/40 underwent domestication processes in order to comfort human life even from a dietary point of view. Less than 14 species, among these cattle, goats, sheep, buffalo and chickens make up about 90% of the globally bred livestock for food production. In the last decades an alarmed genetic erosion has appeared within these species⁹⁹¹⁰⁰. The FAO data themselves show that over the last six years, every month one of the races was off. A very alarming situation from the point of view of the human specie's future. The great variety of plant species which over the millennia have been selected and grown, and the animals which were tamed and bred, forms the basis to the genetic resources which farmers and breeders have delivered to us preserving traditions and culture. The plant biodiversity is, as we've already referred, the result from the natural selection which men have been so skill to detect and enhance because of its importance for agriculture. Its preservation therefore depends upon a right management and methods of a sustainable production. One feature of the most important plant and animal species connected with men and their feeding was their capability to adapt themselves to a great range of environment. Furthermore, crops diversity also contributes to qualitatively select the feeding enhanced by

⁹⁹ Fao News article 'Genetic diversity of livestock can help feed a hotter, harsher world' retrived from: <http://www.fao.org/news/story/en/item/380661/icode/>

¹⁰⁰ FAO- II° Report on agro Biodiversity, retrived from <http://www.unric.org/it/attualita/27077-fao-iid-rapporto-biodiversita-agricola>

the variety of food, particularly with fruit and vegetables. These are very important aspects when dealing with the food availability which can contribute to the feeding diversification through different nutritional diets helping to struggle against malnourishment, obesity and other health problems all over the world.

Further studies carried out by FAO, one over three people around the world suffers diseases related to malnourishment and/or because of an inadequate access to food. The reasons of malnourishment are complex, but it is so far well known that the extreme feeding simplification contributes much to this feeding deviancy. In cities, most of the energy taken by citizens comes from refined carbohydrates (above all wheat, rice and sugar) and transformed (fats and oils), which are at present most convenient in many developing countries.

In most developing countries of the world, in rural indigenous areas, traditional food, closely linked to local biodiversity, have often shown more nutrient than modern highly globalised food but because their lack of suitability for markets they are often ignored, less grown up and gradually forgotten.

3.1.2 Talking about biodiversity: wherefrom to start?

Before 1986 the term “biodiversity” didn’t exist; it made its first entry in 1988 (Wilson and Peter 1988), to be well known in many environmentalist, political, nongovernmental departments. After a lot of preparatory events which allowed to reflect on the subjects related to biodiversity, in 1992 the Convention on biological Diversity (CBD) is formed and it is approved during the world Summit of Heads of States in Rio de Janeiro, on the occasion of the UN Conference on Environment and Development (UNCED). CBD was made active and binding for the signing countries in December 1993, having reached the necessary number of membership acceptances. Up to now the accession countries (Parties) are 193.

Rio Convention provides three key issues: Genetic resources (or biodiversity more generally speaking) cease to be a common good with open access and they become a property owned by the Governments of the States where they come from and find themselves; preservation is closely bound to the sustainable use of natural resources; the access to the resources (not only tangible, but also intangible, like traditional knowledge) must be correctly adjusted to the right sharing of the benefits arising from the use of such resources (benefit sharing).

Concerning the agro biodiversity, CBD has different relevant implications which are summed up as follows:

The preservation *in situ* is acknowledged as a primary approach for the biodiversity preservation.

The preservation *ex situ* is mostly considered as a complement for the preservation *in situ*, and to be developed preferably in the original Country of the genetic resource.

The harvest from the natural environment for nature conservation purposes *ex situ* must be so regulated that it doesn't menace ecosystems and populations *in situ*.

The access to genetic resources must be eased for uses in accordance with the environment and without restrictions to Convention's purposes (that is preservation and sustainable use of biological diversity and the fair and equitable sharing of the benefits arising out of their use)¹⁰¹.

A most interesting aspect, even though in CBD is barely marginal, is having introduced the concept of link with local, cultural and agrifood traditions from the original area which grants agro biodiversity as a social cultural aspect which is today most relevant. All these issues are being addressed with further studies which for the sake of brevity are not

¹⁰¹ Francesco Sottile, 'La biodiversità agraria: basi di partenza ed evoluzione del contesto', retrived from http://www.scienzattiva.eu/wp-content/uploads/2014/10/STAB_A_Biodiversita-agraria_SOTTILE.pdf

referred to; it must be referred only the increasingly crucial effort on an international basis deriving from the consciousness of the risk of biodiversity loss on a global basis related to the increasingly wide diffusion of distressing data on specie's quality, especially plants and animals, which men have already lost in just a few centuries and the huge amount they are going to lose definitively in just a few years.

In this context and with this consciousness, are increasingly interesting the aspects linked with the genetic resources conservation, a preservation departing from the conviction that every resource, both of animal and vegetable origin, can be interesting for its exploitation on a local basis but that, at the same time, it is worth to keep in the future in favour of generations which could get any kind of benefits.

3.1.3 The preservation of agro biodiversity

Preservation of agro biodiversity is a vitally important subject because the topic involves the survival and continuity in living organisms. It goes there is no need to say that in the range of any conservative action, the ultimate purpose deals with the safeguard of genetic resources and their diversity. At the same time the conservation process must be addressed to every level of biological organisation.

It is thus possible to detect different scenarios bound to the preservation topic.

- Genetic preservation
 - Preservation on a genotype basis in which cultivated types are inserted because of the presence of peculiar features;
 - Preservation on a species basis by which they try to fulfil the need to protect it against danger of extinction and/or erosion;

- Preservation on a community and ecosystem basis which involves the maintaining of harmony in which the species has developed¹⁰².

It must also be acknowledged that since the number of biological entities needing protection is far higher than the actual resource availability, it will be needed to extend a priority scale for the preservation following a hierarchy for choosing considering the under mentioned variables:

- The rarity level and danger of extinction, even though the commitment shall have to be widened up to the highest point;
- The species' usefulness for mankind;
- The evolution history, and thus the species' ecologic worth;
- The species/accession's usefulness with the purpose of rural and local economic development of a territory.
- The preservation strategies for value genetic resources depend upon:
 - The nature of the organisms: length of life cycles, impairing systems, population size come into play;
 - The time scale: preservation must be planned according to present or future danger;
 - The socio-economic reality in which it is acted;
 - The preservation purpose and the integrity level should be maintained. It is possible a preservation of genetic adaptability, or otherwise the maintenance of the genetic potential necessary to the expression of peculiar characters, but that at the same time is related to the greatest intraspecific variability¹⁰³.

¹⁰² Renato Massa, *'Il secolo della biodiversità'*, Milano, Jaca Book, 2005

¹⁰³ Dipartimento per le attività bibliotecarie, documentali e per l'informazione Dipartimento Difesa della natura *'Alla scoperta della Biodiversità'*, 2010, retrived from

Generally speaking the conservation action envisages a development through two main guidelines. We may distinguish the conservation *in situ* from the conservation *ex situ*. The two different approaches aim to the same goals and must be considered as complementary. Conservation *in situ* involves especially the population and the ecosystem, but it can be related also to a single species, accession or cultivar. In this last case the conservation regards the maintenance of the biologic entity in question, of the communities to which they belong, but also of the settling and adapting environment and results to be the approach which best takes care of the evolution component of the specie.

Conservation *ex situ* is aimed to the conservation of the germoplasm in “artificial” environments in any case or extern to the original identification one and is carried out especially through collection camps and germoplasm banks. These latter, originally used for the conservation of relict menaced species and subspecies with an interest mostly agro-food (variety, cultivar, landrace, etc) have today a larger reference being related to the conservation of spontaneous vegetation, endemic protected, with the purpose not only to preserve genetic variability, but also to have that available for using in the area of an eco-sustainable management of the territory.

Conservation:

Conservation in appropriate structures and by different means, depending upon the considered species (seed bank, bank of propagules/seedlings/ tissues in vitro, collection camps).

***Ex situ* Conservation**

Conservation of ecosystems and of natural habitats and the maintenance of populations and species in their natural environment. It is related to all the species, either wild or nurtured. Following what was by

CBD established the natural environment is that where such species developed their distinguishing features.

In situ/on farm

Compared to the conservation *in situ*, the conservation *ex situ* has a more restricted area of application even though it takes a characteristic of essentiality every time the first one resulted of difficult realisation. Cases of rare species are mentioned, of declining populations even because new attacks by pathogens, of genes primary pools with a serious risk for pollution¹⁰⁴.

The conservation *ex situ* is however desirable as a completion of any conservative intervention *in situ*, since it gives us the possibility that a precious propagating material is available in case of dramatic environmental changes of the original habitats. At present it is the most common used form for the agro and forest species, and also for the similar wild ones, since it owns uncontested positive qualities such as the possibility to have at disposal few conservation structures where a big amount of germoplasm can be collected and kept in different geographic areas. For those (species) of agricultural interest, it finds a vast application in all those cases in which an agronomic comparison between accessions or cultivar of the same species is useful envisaging an economic revaluation and/or for a new use in strategies of genetic enhancement.

Agro biodiversity on a horticultural basis collects all the possible biological variants and first of all varieties. These are housed in the horticultural area where they can undergo in a more or less timely way or in a longer time, genetic erosion processes. It is therefore requested conservative strategies which must be defined according to the plants features for what the planning concerns. The “on farm” conservation seems to be the most functional through the monitoring exercise of

¹⁰⁴ Francesco Sottile, ‘La biodiversità agraria: basi di partenza ed evoluzione del contesto’, retrieved from http://www.scienzattiva.eu/wp-content/uploads/2014/10/STAB_A_Biodiversita-agraria_SOTTILE.pdf

substantial and representative product units managed by local farmers who should be responsible and guarantor for the results and who, in any case, should be adequately trained. The simplest types of the cultural system are related to operational conditions, so that used areas for home backyards are located side by side with farms. Actually, as a general reference, it is being referred that in our Country home backyards occupy a fifth of the whole area reserved to horticulture.

The use of genetic materials duplicated in a business context, and therefore expression of the selective environmental pressure, is still prevailing but the risk level of the genetic erosion is very high because of the late generalised stresses (apparent convenience) in favour of the use of varieties super imposable to those used for the specialized and intensive horticulture.

Generally speaking the conservative strategies vary relating to the genetic material to be conserved. It's being preferred to adopt simple methods since the complex ones pose a greater risk. By this way, the seed conservation is the most widely spread strategy even though the problem stays for the species characterised by recalcitrant seeds (non orthodox seeds) which do not bear dehumidification. Of many species among which many of the native spontaneous, endemic, "wild", very little is known about the reproduction biology and specifically about the biology and ecology of seeds conservation. By that you can easily argue how the solution to such problems acquire priority in plans for genetic plants resources conservation.

It is clear that the same attention must be paid to the genetic certification of the planting material in certification and also to the assessment of the genetic erosion in the conservation period even because it must be a priority having the knowledge of what is being conserved, from the genetic point of view, in the germoplasm banks.

It is well known that conservation follows a very definite route. This starts with the exploration of the entities to be safeguarded; that envisages also a research of the factors to be causing disturbance and how these can act over time and space. Certainly the effective role in the exploration is determined by the rarity of the object (often at a species level and/or as sub-specific entity but in the case of agro species also at the level of a single accession) in connection to the reference territory even though distribution is nowadays determined only partially by historic natural events. After exploration follows collection, taxonomic identification, study and assessment of what one wishes to conserve. The genetic structure on the basis of inside species population is affected by the differential impact of the evolution factors which can determine homogeneity or adapting diversity: that also applies in the case of the sample object of conservation which shall have to consider these facts in order to keep in the course of time that wished integrity.

That shows how conservative strategies have not a time limit, they only need to be constantly monitored at least for those features referred above.

3.1.4 The loss of biodiversity on an ecosystemic basis.

Notwithstanding the crucial relevance of biodiversity for mankind, human activities are leading to the loss of biodiversity more rapidly than ever, up to 1000 times the natural rate of species loss. Notwithstanding the specific importance of crops and livestock, in the last decades extreme alarming levels have been reached without a particular regard for the problems of biodiversity erosion.

One of the most important reasons for the earth biodiversity loss in the last 50 years was the continuous natural and semi natural habitat conversion because of the continuous passage to an intensive and non native agriculture. However an even worse reason for the enormous loss we had was due to the relentless cementification of rural environment.

The climate change which is most recently characterising natural world is to become one of the first reasons on the biodiversity loss determining also a strong challenge for agriculture, whose adapting capability will be possible only if there will be a sufficient genetic diversity of crops and livestock and services supplied by other components of the agro bio diversity. The globalization of economic interests in agriculture and of genetic materials used for human food production are an enormous threat for the conservation of biodiversity¹⁰⁵.

During the second half of the XX century the global food system was able to respond to the doubling of the world population determining a more than doubled food production. The quantity of product, however, not always was accompanied by a quality in terms of nutritional value just because of a progressive variability loss and of a production type approval which caused a standardization of food. Nowadays, according to FAO estimates, it will be necessary to make an even bigger effort since in the next fifty years world population will be much higher. Because of this, the world demand of food is significantly increasing and there is more evidence of a strong difficulty, sometimes exclusively political, to ensure a balanced access to food especially with reference to the southern population of the world. FAO estimates that 854 million people are in a condition of under nutrition, among which 820 million in developing countries, 25 million in transition countries and 9 million in industrialised countries (FAO 2006). Population growth is bigger than the rate of return of the three main cereals (wheat, corn and rice) which supply the basic nutritional needs¹⁰⁶.

The significant increase necessary to the support of the global agricultural production will demand an important contribution from a large scale intensive agriculture. It is however clear for a balanced

¹⁰⁵ Marcelo Sosa-Iudicissa, Lorenzo Vicario ' Biodiversità, natura e suolo', 2016, retrived from: http://www.europarl.europa.eu/atyourservice/it/displayFtu.html?ftuld=FTU_5.4.3.html

¹⁰⁶ FAO- II° Report on agro Biodiversity, retrived from <http://www.unric.org/it/attualita/27077-fao-iid-rapporto-biodiversita-agricola>

analysis that a major contribution to these purposes will be supplied by biodiversity which shall represent an essential resource to meet the challenge. Genetic diversities of plants and animal species, in fact, will certainly adapt to the changing of environmental conditions and will be able to permit production under different conditions, especially the climate changes.

Climate is the most important environmental factor which affects agricultural production; roughly 24% of earth surface is covered by exploited agricultural areas and the cumulative impact of agricultural practises, on a global basis, is significant.

The most important categories of agricultural emissions are:

- Increase of cultivated land with decline of carbon sinks, among which deforestation and conversion of wetlands, in particular peat land;
- Carbon dioxide (CO₂) coming from forest on fire, crop residues, and from deforestation processes themselves;
- Methane (CH₄) with emissions deriving from rice crops;
- Methane emissions coming from ruminants like cattle;
- Use of nitrogenous fertilizers which release nitrous oxide (N₂O)
- CO₂ Emissions from agricultural machines, equipment, transformation processes and from all transport and logistical complexities.

Agriculture accounts for 44% of anthropogenic methane emissions and roughly 70% of prevailing gas level of nitrous oxide, mainly because of conversion of new lands to agriculture¹⁰⁷.

For this reason, it is clear that agriculture, source of such air pollution, can play an important role in the limitation of greenhouse gas emissions through “capture” and storage of carbon in soil and crops,

¹⁰⁷ Marcelo Sosa-Iudicissa, Lorenzo Vicario ‘ Biodiversità, natura e suolo’, 2016, retrived from: http://www.europarl.europa.eu/atyourservice/it/displayFtu.html?ftuld=FTU_5.4.3.html

among which trees. All that through the “exploitation” of a natural capability of the trees, much more significantly than the evergreen ones, to immobilise carbon through photosynthesis and the production of organic substances with subsequent release of oxygen in the atmosphere.

Reductions of greenhouse gas emissions may therefore be prompted by changes in farming systems as well by changes in the land use.

The climate change accounts for a strong challenge for agriculture and it may influence farming activities through an amount of factors, among which:

- Change in water availability;
- Increase of exposure to thermal stress;
- Change in distribution of pests and diseases;
- Greater leaching of soil nutrients during persistent rain;
- Soil erosion through rainfall and strong wind;
- Forest fires in arid regions and flood increase in others¹⁰⁸.

The effects of climate change will be probably much different relating to the different areas under scrutiny; many developing countries might lose over a fifth of their crops, with a subsequent food endangerment, while developed countries might envisage significant increase in the agricultural production. In this context, genetic diversity within plants and animal species will be an invaluable resource because it will underlie the adapting possibilities to the changing conditions which will be gradually highlighted. If many people affirm that intensive agriculture will be the most important means for increasing food production and that this way there is a wide margin to increase yields of crops in developing countries, it is also well known that without

¹⁰⁸ Francesco Sottile, ‘La biodiversità agraria: basi di partenza ed evoluzione del contesto’, retrieved from http://www.scienzattiva.eu/wp-content/uploads/2014/10/STAB_A_Biodiversita-agraria_SOTTILE.pdf

irrigation increase on yields and production are impossible and that, therefore, irrigation will be ever more important in order to increase production. Presently, about 70% of all freshwater withdrawals are used for agriculture – to say the truth much more in developing countries – and the water demand, especially for agricultural purposes, is constantly growing.

At the same time, water availability is increasingly shrinking making this one of the most important non renewable resources. According to FAO about 1,2 billion people live today in river basins with absolute water scarcity. Taking into account that such a situation is more binding in developing countries where there is a very high demand of water from most urbanized areas, it goes without saying that in this countries the available water for irrigated agriculture will nor certainly be able to raise and the hoped future growth of irrigation will be seriously restrained also as availability for a development of areas concerned with crops and livestock breeds. In order to reach the necessary production increase, investments will be required for the realisation of water storage facilities, to improve the productivity in existing irrigation systems and their efficiency for water use.

3.1.5 Genetic erosion and risk of extinction

Since 2002 the scientists who work on biodiversity agreed on a definition of “genetic erosion”; it has been worked out in the Ninth meeting of Genetic Resources Committee for Food and Agriculture of FAO (CGRFA). Genetic erosion is defined as: “genetic diversity loss, in a particular area and in a given period of time, including loss of single genes or combination of genes, just as they may be found in landraces or varieties” (FAO/IPGRI, 2002). Given the above definition, with reference to the cultivated species, it is possible to analyse genetic erosion on three different levels : On a cultural system level, as an impoverishment of grown crops; on a variety level within a determined species, as an impoverishment of the number of grown crops; on an allele

level, as an impoverishment of the allele types existent in the given genetic pool.

Genetic erosion as an absolute loss of a crop (or of a variety).

This approach analyses only what has been lost and not the dynamics leading to that loss on a agricultural system level or population genetics; in this case the disappearance of a crop (or variety) might not yield genetic erosion in case it was balanced by entry of new crops (or varieties); such an approach doesn't take into account the possible loss of specific genes or genes combination and the "cultural" value of varieties.

Genetic erosion as loss of richness/abundance (richness) of the total amount of crops (species), varieties or alleles. A reduction of richness is a better indicator of genetic erosion than the previous one since it takes into account evolution dynamics. A reduction in richness is always accompanied by an absolute loss. On the contrary an absolute loss not necessarily is bound to a richness reduction (it may be a compensation by the entry of another variety). Such an approach however doesn't take into account the importance of varieties or rare alleles and besides is influenced by the wideness of the undertaken analysis.

Genetic erosion as reduction of the evenness which express the relative abundance of a crop (species), variety or type of allele. This kind of an indicator has been developed for the ecology sector and measures diversity analysing relative frequencies. Example : there are two areas, in both are there three different local varieties. In the first area the relative weight of the three varieties is equal to 80, 10 and 10% of the cultivated surface with them, while in the second area the dedicated surface to each variety is equally distributed (33,33%). In the first area the species evenness is lower than in the second one and there is a higher risk of genetic erosion (in terms of cultivated varieties). Similarly a

predominance of some alleles in a specific variety indicates a higher risk of genetic erosion¹⁰⁹.

3.1.6 Maintenance of genetic diversity

As already pointed out, the ex situ conservation consists of representative samples taken from their natural habitat for the conservation which usually takes place off site, or in localities or anyway in such conditions far away from the area of origin and/or identification. Seeds banks are an important part of all this: seeds, genetic samples, of different varieties and ecotypes of cultivated species, are collected and conserved in monitored conditions at low temperature for a possible future use as per reproduction. In the case of in situ conservation – on farm- the conservation of the genetic diversity of plants and animals have developed their distinctive features for the maintenance of culture populations in cultivation and livestock in breeding inside landscapes where the species themselves, either plants or animal. Agricultural sustainable activities inside many traditional agro-systems show useful to preserve genetic diversity in the agricultural landscape, since they help the farmers adjust their crops to the changing conditions through selection. Farmers, in that way, become the real managers and custodians of agrobiodiversity, using the traditional selection in order to maintain diversity of local cultures.

It is evident that cultivation, use and biodiversity conservation intersects in a very significant way with knowledge and local or traditional activities for a sustainable agriculture either in plants or animal sector. Daily farming activities, crops preparation and food consumption are considered as an integral part of many cultures; the core of most crops/breeding systems is the knowledge, tradition and culture of the local population of the rural areas. This local and traditional

¹⁰⁹ Francesco Sottile, 'La biodiversità agraria: basi di partenza ed evoluzione del contesto', retrived from http://www.scienzattiva.eu/wp-content/uploads/2014/10/STAB_A_Biodiversita-agraria_SOTTILE.pdf

knowledge supplied rural communities with the possibility of managing in a sustainable way their farming thus ensuring food security, hunger reduction, and at the same time offering nutrition.

As for Italy the role of the *custodian farmer* has increased its importance throughout the Country. Every region, thank to Rural Development Plans, could identify incentive schemes for these roles either in the plants or animal sector. A new professional figure thus arises, which directly involves farmer's agriculture in the official conservation systems.

From a conservative point of view, these systems have to do with almost all the above mentioned characteristics: there are cases in which the *custodian farmers* act a *ex situ* conservation, thus conserving different species in their own farms, there are cases in which farmers act *in situ/on farm* conservation keeping resources already being in their farms. All this works in favour of conservation, maintenance and enhancement, taking into accounts that it allows also to give an economic value to biodiversity itself ensuring its importance for the farmers.

In Italy, the Institute for Plants Genetic (IGV) from CNR domestically plays a main role and, it might almost be said, as of coordination being also a very important resource in the work of reintroduction of relict local and traditional species in which the interest for its own cultural and food tradition is renewed.

Ex situ tree crop conservation (fruit-trees, olives and grapevines) is certainly more complex since it cannot be realized through the seed but, because of a necessary vegetative propagating, it obliges inevitably the realisation of collection and conservation camps surely more expensive in their realisation and maintenance. Since the end of the seventies, following to an enterprise of the Agricultural Science Committee from CNR, firstly began a national census of the indigenous national accessions and cultivar, by emphasizing the experiences of the individual

institutions (CNR, Ministry Agriculture and Forests, University, Regional agricultural development agencies) and by focusing the attention either on material identified and *in situ* conserved, then prevailing, or on the one *ex situ*. Since then many initiatives contributed to the increase of the knowledge on the subject and many programs were launched aimed to the realisation of *ex situ* conservation centres, or collection camps (*in vivo*) for one species or more.

Many are the initiatives of establishing conservation camps for the fruit-growing biodiversity and many and many scientific institutions (Universities, CNR, CRA but also Regions and Provinces) committed themselves for the realisation of complex systems either *in vivo* or *in vitro*. At the beginning of the years 2000, the Ministry of Agricultural Policies financed the purchase of 30 hectares in the Appia Antica Park, nearby the experimental farm of the Institute of fruit farming, in order to establish the National Centre of Fruit Germplasm which accounts today over 6.000 accessions of more than 20 fruit-tree species. Other collections camps, with less completeness, are spread out throughout the Country since each institution acted, differently and in the course of time, in terms of safeguarding and characterization of indigenous biodiversity.

One of the last problems faced by scientific institutions is the study of the different ways of alternative conservations “*al vivo*” (live) for the arboreal plants, with the aim of reducing the dimension of the cultivated area and consequently the operating costs of collections. To sum up, the activities of the national research institutions were mostly undertaken and carried out in close cooperation with the local and national public offices, as well as with farms, public or private foundations, sharing a great sensibility for the safeguard of fruit crops genetic resources.

Together with the scientific Institutions, nowadays we see a significant increasement of commitment of civil society for the maintenance of genetic resources. There seems to be a common target,

preserving agricultural biodiversity from extinction by protecting small-scale productions and insisting on the necessity of protecting the right of farmers to conserve the species to which they are locally bound.

I totally agree with the approach that Slow Food Italia held for over two decades creating a lot of different projects led by the Slow Food Foundation for the Biodiversity Onlus.

From a document recently edited by Slow Food on occasion of a dialogue with the European Union, we take and refer as follows the opinion of this Association on the subject of the Biodiversity in relation to food and agriculture: Slow Food begins to officially deal with agrobiodiversity in 1997.

'Food is the starting point and remains the leading theme and the ending point of all the subsequent actions, letting Slow Food to group matters generally studied and managed by specific sectors of expertise: environmental, agronomic, social, cultural and economic matters.

This work starts from the safeguarding of genetic resources- with the creation of an inventory of endangered species, varieties, plants ecotypes and breeds created through an intense effort made 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, soil, altitudes) local cultures (languages, dialects, rituals, crafts, architecture) without losing the focus on 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...) important patrimony 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.

In this path the association involves people coming from different experiences and sectors, who accept the challenge of defying traditional working models and going beyond their specialized fields: university professors, agronomists, veterinaries, teachers, cooks and small scales producers(farmers, breeders, processors). These are the main players of biodiversity safeguard, but they represent 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 mere academic exercise. Slow Food projects have two main aims:

1. Supporting and promoting the work of small-scale producers (farmers, breeders, and food processors) that 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 identified parameters. This is a technical approach that is valid in a comparative, objective context, but does not adequately take into account everything that lies behind a local product and has developed over centuries of history. In Slow Food’s definition, the quality of a food product is the result of a story and combines organoleptic and nutritional aspects with the environmental and social sustainability of production. Cultivation techniques must preserve the fertility of the land and hydrographic ecosystems and avoid the use of synthetic chemicals as much as possible.

2. *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. The spreading knowledge of the biodiversity value, in order to make this topic exit from the specialistic field and becomes common heritage for those who daily buys food, advise it to restaurants, taverns, events, for those teaching in schools or projecting policies for land use or for those who simply like gardening at home. Raising awareness requires communication activities, product promotion and consumers' taste education. Slow Food's activities are developed for these 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 GMO's to protect indigenous grape varieties, bees colony healthy etc.), and the creation, in 2004, of the University of Gastronomic Sciences.*

Projects

Since 1997 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. Nineteen national commissions and an international scientific commission evaluate the candidatures. At the moment the catalogued products are 1000, in 60 countries.

Presidia are created around communities and producers who cooperate to develop production rules and product market strategies.

Their aim is to save native breeds, plant varieties and quality artisanal products at risk of disappearing, strengthening producer's organization, promoting areas of origin, preserving techniques and traditional knowledge and adding value to sustainable practises. Slow Food promotes Presidia products through communicating their stories (of producers, knowledge, local areas and production methods) and can use association's network to link producers with consumers (by means of events, the involvement of chefs and support for forms of direct sale such as farmer's markets and purchasing groups). 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 involves 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 models. 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 of Italian cooks and Slow Food Presidia

Slow Food Italy founded a network of more than 260 restaurants and taverns using local products committed to using Slow Food Presidia products indicating the producers on their menus.

Earth Markets

Launched since the beginning of 2006, Earth Markets are farmers' markets which are managed together, where local producers sell local high quality products – produced using sustainable methods – directly to consumers. There currently 20 Earth Markets in 8 countries.

Community and school vegetable gardens

School vegetable gardens are one of the most important tools used by Slow Food in the work done with the 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 garden was started in Berkeley, California. In 2004 Slow Food Italy launched its school vegetable garden project (called "orto in condotta") and within a few years 393 school vegetable gardens had been created across all Italian regions. School vegetable gardens project are growing in many other countries, from Germany to Belarus, and involve teachers, students, parents, grandparents and local producers. In 2010 Slow Food launches the "Thousand vegetable gardens in Africa" project. Thank to massive international mobilisation, a thousand school, community and urban food gardens, will be created in 27 African countries between 2011 and 2012. They are not regular gardens: 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, involving young and being based on the knowledge of wise old people.

In 2014 the project is transformed in " 10.000 vegetable gardens in Africa" as a testimony that the 1.000 gardens have been already overtaken and the target becomes the achievement of a ten times bigger number thanks to the experience and the motivations deriving from the successes in the first years of activity.¹¹⁰

¹¹⁰ Slow Food, Document for dialogue with European union about Biodiversity. Francesco Sottile, 'La biodiversità agraria: basi di partenza ed evoluzione del contesto', retrived from http://www.scienzattiva.eu/wp-content/uploads/2014/10/STAB_A_Biodiversita-agraria_SOTTILE.pdf

3.2 The Problem of Biodiversity

This is a statistic impossible to deny: industrial forms of agriculture, with emphasis on large-scale monoculture crop production, have a negative impact on biodiversity. The Food and Agricultural Organization of the United Nations, referring to the scale of the loss as “extensive,” found that some 75 percent of plant genetic diversity has been lost since 1900 as farmers decided for a genetic uniformity on mass-produced crop varieties.

Since genetically modified crops (a.k.a. GMOs) reinforce genetic homogeneity and promote large scale monocultures, they contribute to the decline in biodiversity and increase vulnerability of crops to climate change, pests and diseases¹¹¹.

Genetically modified crops grow in a dynamic environment and interact with other species of the agro-ecosystem and surrounding environment. As ‘biological novelties to the ecosystems’¹¹², GM crops may potentially affect the ‘fitness of other species, population dynamics, ecological roles, and interactions, promoting local extinctions, population explosions, and changes in community structure and function inside and outside agroecosystems.’¹¹³

The recent concerns raised by Dr. Don Huber, who noted a link between GM crops (engineered to withstand continued applications of glyphosate) plant diseases and spontaneous abortions and infertility in pigs, horses, cattle and other livestock, further underscore the troubling fact that GM crops may likely have a larger negative impact on the agroecosystem and the surrounding environment. More importantly, Huber’s revelations further point to the inaccurate assumptions made by this nation’s regulators. GM crops are not substantially equivalent to

¹¹¹ Rediscovering Biology: Molecular to Global Perspectives, 2003

¹¹² Garcia, Maria Alice and Miguel Altieri, (2005), Transgenic Crops: Implications for Biodiversity and Sustainable Agriculture. Bulletin of Science, Technology & Society

¹¹³ Garcia, M. A. and Miguel A. Transgenic Crops: Implications for Biodiversity and Sustainable Agriculture

their conventional counterparts, they interact in novel ways to impact the plant, the soil and the animals that consume them and government agencies should think twice before deregulating GMOs.

Independent scientists studying the affects of GMOs have also raised other concerns regarding the impact of GMOs on biodiversity. The spread of transgenes to wild or weedy relatives, the impact of GMOs on non target organisms (especially weeds or local varieties) through the acquisition of transgenic traits via hybridization, the evolution of resistance to pests (in case of Bt crops), accumulation of Bt toxins, which remain active in the soil after the crop is plowed under and bind tightly to clays and humic acids and the unanticipated effects of the Bt toxin on non target herbivorous insects¹¹⁴, are areas of concern as are increasing concerns about the adverse impact of GMOs on insects (such as bees, for example), nematodes, and birds, all of whom either consume GMOs seeds or their by-products or are present in glyphosate saturated soils. “The vast majority of soybeans and cotton, and 70% of our corn, is Roundup Ready, leading to over 230 million lbs of glyphosate being sprayed each year,” noted Bill Freese, the Science Policy Analyst at the Center For Food Safety.

Furthermore, the impact of GMOs on biodiversity is also seen in the development of superweeds and superbugs since over-reliance on and the abundant use of single herbicide and pesticide lead to resistance in the pest community. The “unregulated use of glyphosate-resistant crop systems has triggered an epidemic of glyphosate-resistant weeds infesting 10 million acres or more,” in this Country alone.

GMOs contribute to a decline in biodiversity in one other way. According to Bill Freese, the Science Policy Analyst with the Center For Food Safety, as biotech companies acquire conventional seed

¹¹⁴ Garcia, M. A. and Miguel A. Transgenic Crops: Implications for Biodiversity and Sustainable Agriculture

companies, conventional and organic seeds are pushed out. Freese states that:

‘When Monsanto buys up seed firms, it discontinues the conventional lines, and offers only biotech versions. [...] So from Monsanto’s perspective, it makes no sense to sell a high-quality conventional variety when you can charge higher prices and make more money selling that exact same seed, only with a Roundup Ready or other biotech traits stuck into it.

It’s not just Monsanto. Bayer and other biotech firms don’t want to sell conventional varieties anymore. They are not as profitable. And since the biotech trait is patented, you get the bonus of patent protection when you insert the trait into a seed. That allows the likes of Monsanto to sue farmers for the “crime” (patent infringement) of saving seed, [...]’

While additional studies are needed to gain a fuller understanding of the impact of GMOs on biodiversity, the currently available information begs the question of whether GMOs bring more harm than good, especially when small-scale farmers, using ecological methods, can address the pressing agricultural concerns.

3.3 Pros and Cons of GMO

Many people today take for granted exactly where the foods they eat come from. In fact, genetically modified foods have become a commonplace thing in America, even though few people understand just what "genetically modified" means. While there are some benefits that genetically modified foods may offer, there are also some risks and negative effects that these foods can cause as well.

When the term "genetically modified" is used to describe a food, it means that the genetic makeup of one of the ingredients in that food has been altered. This is achieved by a very special set of technologies that combine the genes from different organisms, with the resulting organism being called a genetically modified food. In most cases, the specific genes that are combined have been hand-picked for the specific traits that they have. Those traits could include everything from the resistance to insects to specific nutritional value. These genetically modified foods can be in anything from corn to canola oil, which are quite common ingredients in many foods found on the market today such as snacks, cereals and sodas.

3.3.1 Pros Of Genetically Modified Foods

As far as the producers of GMO's are concerned, there are some benefits linked to genetically modified foods, including:

Resistance to disease: Genes can be modified to make crops more resilient when it comes to disease, especially those spread through insects. This can lead to higher crop yields, which many experts argue can help to feed people in developing countries.

Cost: Because foods can be more resistant to disease, it reduces the cost necessary for pesticides and herbicides. And although genetically modified seeds are a more costly investment initially, this reduction in

cost along with fewer lost crops leads to more profits. In many cases, that lower cost is passed onto the consumer through lower food prices.

Long-life: Some genetically modified foods, particularly fruits and veggies, have a longer shelf life than natural products.

Nutritional content: Foods are often genetically modified in order to increase their nutritional content. This is especially helpful for certain populations where a specific nutrient is lacking in the local diet¹¹⁵.

3.3.2 Cons Of Genetically Modified Foods

Although there are some advantages related to genetically modified foods, there are several risks that have been associated with these foods. Most of them affect people's health:

Allergens and toxins: Some genetically modified foods may contain higher levels of allergens and toxins, which can have negative effects on the personal health of those who eat them. This may be especially dangerous for people with serious food allergies.

Antibiotic resistance: Because genetically modified foods are often developed to fight off certain pesticides and herbicides, there may be an increased risk that people who eat those foods may be more resistant to antibiotics.

New diseases: Viruses and bacteria are used in the process of modifying foods, which means that there is a possibility that they could cause the development of a new disease.

Nutritional content: Not all genetically modified foods are changed to increase their nutritional content. Instead, these foods may actually lose nutritional content in the process of altering their genetic makeup.

¹¹⁵ Re, E. (2015, June 9). *IL DIFFICILE RAPPORTO TRA OGM E BIODIVERSITÀ*. Retrieved from Bio Chronicles: <http://www.biochronicles.net/news/bioscienze/difficile-rapporto-ogm-biodiversita/>

Loss of biodiversity: Genetically modified foods could potentially cause damage to other organisms in the ecosystems where they are grown. If these organisms are killed off, it leads to a loss of biodiversity in the environment while also putting other organisms at risk by creating an unstable ecosystem¹¹⁶.

3.3.3 How To Find Non-Genetically Modified Foods

There are plenty of books, shopping guides and websites that you can refer to when trying to determine whether a food has been genetically modified or not. However, if you are at the store and trying to decide whether to buy a product, you can look for items that are 100 percent organic. Any certified organic food is guaranteed to not be genetically modified. Additionally, you can find some products that are labeled as "GMO-free" or "non-GM," which indicates that no genetically modified ingredients have been used. This isn't a guarantee since it is not a regulated label, so some research on the manufacturer of the food may be helpful.

Many people also avoid genetically modified products by shopping at local farmers' markets. This gives individuals a chance to talk to farmers directly about whether they use any genetically modified seeds for their crops. You can also grow your own food in a home garden, where you can ensure that each and every food you plant is not genetically modified¹¹⁷.

¹¹⁶ Re, E. (2015, June 9). *IL DIFFICILE RAPPORTO TRA OGM E BIODIVERSITÀ*. Retrieved from Bio Chronicles: <http://www.biochronicles.net/news/bioscienze/difficile-rapporto-ogm-biodiversita/>

¹¹⁷ Petrini, C. (2014, October 5). *Anche gli scienziati divisi sugli Ogm: ecco perché all'Italia conviene dire no*. Retrieved from Repubblica: http://www.repubblica.it/ambiente/2014/10/05/news/anche_gli_scientiati_divisi_sugli_ogm_ecco_per_ch_allitalia_conviene_dire_no-97358699/

3.4 The path of Italy towards the protection of Biodiversity

Let's start off by reiterating the concept that as always Italian politics collided against the use of GMOs for its crops, both by the various governments and by citizens who have always looked with an eye of suspicion this kind of 'evolution' in agriculture. What in fact distinguishes the local products has always been the quality rather than the quantity as well as traditional methods to produce them. The technology has been increasingly used, and only in order to improve these methods, but without distorting the final product in its shape, size or growth rate. For these reasons, we have often been in opposition against the European Union, above all in the early 2000s with the adoption of Directive 2001/18 / EC that inserted GMO crops in member states¹¹⁸. Thanks to scientific studies and battles both on the political and on the legislative and thanks to the involvement of other States against the introduction of GM crops, Italy has always managed to defend the quality and safety of its agricultural products until obtaining a real big victory in 2015 when Europe issued the directive (EU) 2015/412 of the European Parliament and of the Council of 11 March 2015¹¹⁹. This directive was to amend the previous regulation regarding the possibility for Member States to restrict or prohibit the cultivation of genetically modified organisms (GMOs) in their territory. Timely was the request made by Minister Maurizio Martina, in consultation with the Minister Gian Luca Galletti and the Minister of Health Beatrice Lorenzin, sent to the European Commission requests for exclusion of the whole Italian territory from the cultivation of all GMOs authorized at European level. This success was only the tip of the iceberg of the will of Italy to defend its products and culture from external aggression in this specific area that has always been a pride for

¹¹⁸ Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001, retrived from: http://www.biosafety.be/PDF/2001_18.pdf

¹¹⁹ Directive 2015/412/EC of the European Parliament and of the Council of 11 March 2015 retrived from: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015L0412&from=EN>

our Country. I find particularly significant the interview of 2014 that the Minister Maurizio Martina has issued to Sole 24 Ore: *'According to the analysis, in 2050 the world's population will almost double that of 1970, with a rapid increase in food consumption and a radical change in contemporary diets. As indicated by the FAO projections, the consumption of products such as meat and milk will see an increase of between 50% and 100% by 2025. In addition to the growing demand for food, then we see a decrease, estimated over the coming decades in the order of 20% of the arable and fertile lands. It is within this scenario that Italy must make strategic choices. With this in mind we are building a national project for the food in which the strategic plan for innovation and research, we presented this week, it is a key piece. The goal is to promote a sustainable and competitive agriculture and agri-food model, focusing heavily on innovation and research and seizing the opportunities that will arise over the coming seven years in particular. I think of the European resources of Horizon 2020, which allocated 3.8 billion to innovation projects and research in agro. To 5.4 billion euro for the sector by the cohesion funds and also to the new Common Agricultural Policy, in particular the chapter on rural development, where we work for the growth of innovative solutions with almost 1 billion euro of the total budget. Italy will do its part by giving its scientific contribution to the dissemination of knowledge in Europe. We want to write a new page of enhancement of our capability, because we think that innovation must be the root for the growth of sustainability and competitiveness in agriculture. From there it began a long process of dialogue with all players in the agricultural and the scientific sectors of our Country, to identify the lines of action of research and define our national interests innovation in plant and animal breeding. The last two decades, the development of biotechnology and science "OMICS" has enabled advancements never before achieved in the understanding of the biological mechanisms of cultivated plants and animals in livestock production. In view of environmental and economic sustainability, while*

respecting the natural resources, but also with the aim of a necessary increase in productivity and the nutritional value of production, research has been directed toward the application of new technologies to assist the genetic improvement. [...] The last few years were characterized by an animated debate "for or against GMOs" always focused on scientific arguments to support the thesis "risk, no-risk". Today I believe we should reasonably shift the focus on a more correct policy plan of evaluation, as well as scientific, about the economic and social conventions that the national system chooses to pursue. And take a decisive step forward: beyond the confrontation between pro- and anti-GM, defined recently by the prestigious scientific journal Nature "The tarnished promise." We are among the richest countries in biodiversity, we have half the plant species and a third of those animals present throughout Europe, with over 58 thousand species. We want to focus on the distinctiveness and specificity of our agricultural heritage. Every year in Italy will invest 200 million euro for innovation and research in the food industry and our researchers carry out successful work very considerable genomics. Some examples? In the area of livestock production we are one of the first countries in the world who has studied and applied genetic selection of brood stock and the use of tags to improve the quality of the great excellence, for example with the application of genetic markers in swine selection against the gene that determines the meat of PES type. Have developed synergies between our main research organization in agriculture, CRA, and the corresponding colleagues in China to apply the Italian genomic technologies in the buffalo species, for that Country, it is the most species of livestock interest with about 23 million buffalo. In dairy cattle we are applying the most recent technologies for the study of so-called natural resistance to disease, with the aim of selecting the most resistant animals and capable of a more efficient defense response with the consequent result to reduce the use of antibiotics in breeding. In the field of plant production, the development of 'omics' sciences to conventional breeding programs have allowed results of fundamental

importance, both for the development of national production, traditional and indigenous varieties, both in the creation of new varieties adapted to our growing environments . To mention just a few cases we have participated in the sequencing of genomes of important species, such as the screw, the Peach and Wheat. For the latter we are in the international network called "wheat initiatives" and in the international consortium responsible for the sequencing of chromosome 5A of particular relevance. Always for wheat, molecular genetic studies associated with biochemical and clinical investigations have identified peptide sequences in precious intestinal mucosal protection from gluten damage in celiac subjects. For species cereals, in general, they have been identified and are being characterization, various genes responsible for resistance to diseases: molecular markers associated with them are used for conventional breeding programs. The search for genetic markers associated with resistance and specific characters that relate to quality and the structure of the plant and the fruit are being for horticultural species even in public-private partnership schemes. In the case of fruit, as well as new varieties of pear and strawberry constituted by the CRA, include derivative from studies of the peach sequencing work, which made it possible to identify genes responsible for qualitative characteristics of the fruit. Do not underestimate the value of molecular tools has powerful means for diagnosis, so deporting to the realization of rapid kit for the early identification of diseases, allowing a fast and significant intervention of defense. Finally, it is thanks to molecular markers identified on genes that we can detect particular quality features, which can be put in place, traceability systems, traceability and fraud, to protect the national product and quality supply chains. Just this? Of course not. We can do much more, we are aware of. Especially in terms of public research. And it is with this ambition that for the first time we have a strategic plan that defines the objectives of our next actions. We expect the contribution of all, to keep the discussion open and strengthen the virtuous cooperation. To build a concrete future of

*innovation and investment in a vital field for Italy of today and tomorrow*¹²⁰.

As we have previously noted, plans and projects have arrived and have been a huge success both nationally and internationally. Expo Milano 2015 and all of the cuisine initiatives made to protect Italian culture that could also be revolved into several satellite activities bringing a new economic boost. Moreover, among these initiatives definitely one that gave greater protection and guarantee to products and to the Italian agricultural sector was the Law of 1 December 2015 n. 194 concerning the arrangements for the protection and enhancement of biodiversity for food and agriculture interest. Taking advantage of the change of course in European policies with regard to GMOs Italy enacted this law that we will now analyze in detail.

The article 1 of the law lays down the principles for the establishment a National system of protection and enhancement of biodiversity for food and agriculture interests, aimed to the protection of genetic resources for food and agricultural interest from local extinction and genetic erosion. These objectives are also pursued through the protection of rural areas, helping to limit the depopulation and preserve the territory from genetic pollution and loss of genetic heritage. The article 1 also deals with presenting all the constituent elements of the national system of protection and enhancement of biodiversity for food and agriculture interest: the national biodiversity of agricultural and food interest Registry; the National Network of biodiversity of agricultural and food interest; the national biodiversity of agricultural and food interest Portal; the Standing Committee on the biodiversity of agricultural and food interest. In addition, for the purposes of this Act, the central, regional and local authorities and institutions and public bodies

¹²⁰ Ministero delle politiche agricole alimentari e forestali (n.d.). *Così l'Italia supererà il duello «pro o contro Ogm»*. Retrieved from Politiche Agricole: <https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/7834>

concerned are required to provide to the subjects of the national system of protection and enhancement of biodiversity of agricultural and food-related data and information in their availability. For the purposes of using and transmission of knowledge on biodiversity in agricultural and food interest, the Ministry of agricultural food and forestry policies, the regions and the autonomous provinces of Trento and Bolzano can also promote the activities of farmers to help restore genetic resources local food and vegetable farming and carrying out prevention activities and land management required to attain the conservation objectives of the biodiversity of agricultural and food-related interest. Finally, the Ministry of Food and Forestry Policies, the Ministry of Education, University and Research, the regions, the autonomous provinces of Trento and Bolzano and universities can promote projects relating to the transfer of knowledge acquired in the field of biodiversity of agricultural and food interest to farmers, students and consumers, through appropriate training and cultural initiatives¹²¹.

The article 2: Defining all the terms used in the same and to avoid misunderstandings about the above terms and about this topic.

First, it defines the term 'genetic resources for food and agricultural interest' as genetic material of plant, animal and microbial, having an actual or potential value for food and agriculture. Secondly to define 'local resources' as genetic resources for food and agricultural interest that originated in a specific territory; that, while being of non-native origin, but non-invasive, have been introduced for a long time in the current area of reference, traditionally naturalized and integrated into its agriculture and in its breeding; which, although originating in a specific territory, are currently missing and kept in botanical gardens, farms or conservation or research centers in other regions or countries. Then it defines the terms 'custodian farmers' and 'custodian breeders'. The first

¹²¹ Camera dei Deputati e del Senato della Repubblica (2015, December 1). '*Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare*' ART. 1. Retrieved from http://www.biozootec.it/public/documents/legge_biodiversit%C3%A0_arduino.pdf

are those farmers who engage in conservation as part of the farm or *in situ*, of genetic resources for food and local agricultural interest at risk of extinction or genetic erosion. The seconds are breeders who engage in conservation as part of the farm or *in situ*, of genetic resources for food and agricultural interest local animals at risk of extinction or genetic erosion¹²².

The Article 3: National biodiversity of agricultural and food Interest Registry. This entity is established by the Ministry of Agriculture Food and Forestry Policies. The Registry shows all the genetic resources of food and agricultural interest local vegetables, animals or microbials subjects at risk of extinction or genetic erosion. The inclusion of a genetic resource of interest in food and local agriculture in the Registry is subject to an investigation aimed to verifying that a correct characterization and identification of the resource, its adequate preservation *in situ* or in the context of agricultural *ex situ*, correct indication of the place of storage and the eventual possibility of generating propagation material. In lack of even just one of the requirements listed in the first period, you can not proceed with the registration. Species, varieties or races already identified from the repertoires or vegetable logs of regions and autonomous provinces of Trento and Bolzano or by the pedigree and the civil registers books, as well as the autochthonous genetic types animals in danger of extinction according to the FAO classification, they are included in the Registry. Genetic resources for food and agricultural interest listed in the Registry are maintained under the responsibility and public control, they are not subject to intellectual property rights or to any other law or technology that limits access or playback by farmers, including the industrial patents, and cannot be, in any case, protection through plant variety rights under the international Convention for the protection of plant varieties. There are also patentable genetic resources for food and agricultural interests

¹²² ‘ Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare’ ART. 2

also partly derived from those registered in the Registry, or their parts and components¹²³.

Article 4: Defining the National Network of biodiversity of agricultural and food interests. This network is made up of the local, regional and national authorities for the *ex situ* conservation of germplasm and by custodian farmers and breeders. The network carries out any activity to preserve the genetic resources of food and agricultural interest from local extinction or genetic erosion, through *in situ* conservation or as part of farm or *ex situ*, as well as to encourage the reintroduction or cultivation in other forms of exploitation. The Network is coordinated by the Ministry of Agricultural Food and Forestry Policies, in agreement with the regions and the autonomous provinces of Trento and Bolzano¹²⁴.

The article 5: the National Portal of biodiversity of agricultural and food interest. The Portal has been created by the Ministry of Agriculture Food and Forestry Policies in order to establish a system of interlinked databases of genetic resources for food and local agricultural interest identified, characterized and presented to the national territory; disseminating research and information on genetic resources for food and agricultural interest premises in order to optimize efforts aimed at their protection and management; the Portal has the power of monitoring the state of conservation of the biodiversity of agricultural and food interest in Italy. Public research institutions shall inform the Portal, also through their documentation platforms, the results of any research conducted on the genetic resources for food and local interest agricultural interest¹²⁵.

Chapter 6: *in situ* conservation, as part of farm and *ex situ*. The Ministry of agricultural food and forestry policies, the regions and the

¹²³ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 3.

¹²⁴ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 4.

¹²⁵ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 5.

autonomous provinces of Trento and Bolzano, within their respective competence, identify, without new or increased burdens on public finance, public and private entities with proven experience in the field to activate the *ex situ* conservation of genetic resources for food and agricultural interest premises of its own territory, also for the purpose of participation in the national Network of biodiversity of agricultural and food interest. The regions and autonomous provinces of Trento and Bolzano identifies custodian farmers, without new or increased burdens on public finances, also at the request of the farmers themselves, as those authorized to enable the conservation, *in situ* or within farms, genetic resources for food and local vegetables agricultural interest at risk of extinction or genetic erosion of its territory. As well as to encourage and promote the work they carry out, and arrange their registration with the national Network of biodiversity of agricultural and food interest¹²⁶.

Article 7: Plan and national guidelines for the conservation of biodiversity of agricultural and food interests. The updating of the National Plan on biodiversity of agricultural interest and national guidelines for *in situ* conservation, on farm and *ex situ* conservation of plant biodiversity, animal and microbial agricultural interest is provided by the Minister of agricultural food and forestry policies, after reaching agreement within the Standing Conference for relations between the State, regions and autonomous provinces of Trento and Bolzano, and after the consultation with the Standing Committee on the biodiversity of agricultural and food interest. The National Plan on biodiversity of agricultural interest and national guidelines are updated regularly and in any case at least every five years in order to take account of progress achieved in the implementation of activities and developments in

¹²⁶ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART.6.

scientific research and the development of regulations matters at national and international level¹²⁷.

The article 8: Permanent Committee on the biodiversity of agricultural and food interests. In order to ensure the coordination of actions at the State, regional and autonomous provinces of Trento and Bolzano on the protection of biodiversity in agriculture and food interest it is established at the Ministry of Agriculture Food and Forestry Policies. The Committee is renewed every five years. The Committee is chaired by a representative of the Ministry of agricultural food and forestry policies and it is made up of six representatives of the regions and autonomous provinces of Trento and Bolzano, identified by the regions themselves in the Standing Conference for relations between the State, regions and autonomous provinces of Trento and Bolzano, by a representative of the Ministry of Education, University and Research, a representative of the Ministry of environment and protection of land and sea, by a representative of the Ministry of health and three representatives of custodians farmers and breeders appointed by the permanent Conference for relations between the State, regions and autonomous provinces of Trento and Bolzano. The Committee has, in particular, the following tasks:

- a) defining the objectives and the results of individual actions under the National Plan on biodiversity of agricultural interest;
- b) collecting the advanced search requests from public and private parties and forwarded to the relevant scientific institutions;
- c) promoting the exchange of experience and information in order to ensure implementation of existing legislation;

¹²⁷ *‘Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare’ ART. 7.*

d) collecting and harmonizing proposals for action towards protection and sustainable use of genetic resources for food and local agricultural interest, coordinating the actions to be taken;

e) facilitating the transfer of information to local operators;

f) establishing a common system of identification, characterization and evaluation of genetic resources related to food and local agriculture¹²⁸.

Article 9: The protection of plant varieties entered in the Registry, and of food products protected by trademarks. The registered plant varieties in the National Registry of biodiversity of agricultural interest and food as well as the varieties from which they derive productions marked by naming trademarks of protected origin, a protected geographical indication or traditional specialty guaranteed, and from which the traditional food products¹²⁹.

Article 10: Fund for the protection of biodiversity for food and agriculture interest. In order to protect the biodiversity of agricultural and food interests, in the estimates of the Ministry of agricultural food and forestry policies is established, with a budget of 500,000 Euros per year with effect from 2015, the Fund for the protection of biodiversity for food and agriculture interest, to support the actions of custodian farmers and breeders, as well as for the support of government agencies engaged solely for the purpose of multiplication in the production and preservation of conservation variety seeds at risk of genetic erosion or extinction. The Minister of agricultural food and forestry policies, in consultation with the Minister of Environment and Protection of Land and Sea and the Minister of Economy and Finance, defines, in

¹²⁸ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 8.

¹²⁹ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 9.

compliance with the spending limit, the mode of operation of the Fund and identifies actions to protect biodiversity to sustain¹³⁰.

Article 11: Marketing of conservation of the variety of seeds. The farmers producing seed varieties registered in the national register of conservation varieties, in the places where these varieties have evolved their unique properties, they are recognized the right to direct sales and local seed field or propagation materials relating to such varieties and products in the company, and the right to free trade within the national biodiversity Network agriculture and food interests¹³¹.

Article 12: Establishment of the routes of biodiversity for agriculture and food interest. The State, the regions and the autonomous provinces of Trento and Bolzano can develop regular promotional campaigns for the protection and enhancement of biodiversity of agricultural and food interests. In this area it is also provided special programs in order to promote knowledge of the genetic resources of local food and agricultural interests listed in the National Registry of biodiversity of agricultural and food interests and development of the areas concerned, including the places of *in situ* or as part of farm or *ex situ* and marketing places of the products connected to the same resources, including direct sales points¹³².

Article 13: Food communities and biodiversity of agricultural and food interest. In order to raise awareness, to support the agricultural and food production, in particular the national network and to promote behaviors that protect the biodiversity of agricultural and food interest, the Ministry of agricultural food and forestry policies, the regions and the provinces independent of Trento and Bolzano, with the contribution of consortiums and other approved entities, can promote, without new or

¹³⁰ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 10.

¹³¹ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 11.

¹³² 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 12.

increased burdens on public finances, the establishment of food communities and biodiversity of agricultural and food interests. We define as 'food communities and biodiversity of agricultural and food interests' the local areas resulting from agreements between local farmers, custodian farmers and breeders, purchasing groups, schools and universities, research centers, associations for the protection of the quality biodiversity of agricultural and food-related, school canteens, hospitals, catering establishments, shops, small and medium-sized craft businesses in agricultural and food processing, as well as government agencies. The agreements may concern:

- a) the study, recovery and transfer of knowledge on the genetic resources of local food and agricultural interest;
- b) the creation of forms of short chain, direct sales, exchange and purchase of agricultural and food products under local circuits;
- c) the study and dissemination of their organic farming practices and other cropping systems with low environmental impact and aimed at saving water, to lower carbon dioxide emissions, the increased soil fertility and to lower utilization of containers for distribution and for the sale of products;
- d) the study, retrieval and transmission of traditional knowledge related to agricultural crops, natural selection of seed to cope with climate change and proper nutrition;
- e) the creation of educational (vegetable) gardens, social, urban and collective, such as methods for promoting local varieties, environmental education and agricultural practices, social aggregation, regeneration of brownfield sites or degraded and unused agricultural land¹³³.

¹³³ *'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 13.*

Article 14: Establishment of the National Biodiversity Day of agriculture and food interests. The Italian Republic recognizes the day May 20 as National Day of biodiversity of agricultural and food interests. On the occasion of the National Day of biodiversity of agricultural and food interests there will be ceremonies, initiatives, meetings and seminars, particularly in schools of all levels, dedicated to the universal values of agricultural biodiversity and the methods of protection and conservation of existing assets¹³⁴.

Article 15: Initiatives in schools. In order to sensitize young people on the importance of agricultural biodiversity and the ways of protection and conservation of existing assets, the regions, during the preparation of the implementing measures of the rural development programs, can promote projects to realize, in the schools of each levels, actions and initiatives aimed at the knowledge of the agri-food products and local resources¹³⁵.

Article 16: Interventions for research on biodiversity in agricultural and food interests. The three-year plan of activities of the Council for research in agriculture and the agrarian economy analysis, provides interventions for research on biodiversity in agricultural and food interests and the techniques needed to foster it, protect it and develop it as well as the interventions aimed to improve correct practices in respect for human consumption, animal feed with non-GM products and to save water. The Minister of agricultural food and forestry policies destines, by decree, a share of the resources entered in the annual estimates of the Ministry of agricultural food and forestry policies to the financing of innovative projects on biodiversity in agricultural and food

¹³⁴ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 14.

¹³⁵ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 15.

interests, after the procedures selective public evidence provided by law¹³⁶.

Article 17: Enactments. The Minister of agricultural food and forestry policies, defines the procedures for setting up and functioning of the Registry and identifies the technical implementation of the national network, as well as the specialized reference centers in the collection, preparation and conservation of genetic resources for the interest of local food and agriculture in accordance with the provisions of the national guidelines¹³⁷.

Article 18: financial provisions. The costs deriving from the provisions of Articles 3, 5 and 10, amounting to a total of EUR 940,000 for 2015 and € 500,000 from the year 2016, for by a corresponding reduction of the allocation of the special fund of the current part in writing for the purposes of the 2015-2017 three-year budget, under the 'reserve and special funds' mission' funds to be distributed "state of the Ministry of economy and Finance for the year 2015, making partial using the reserve funds of the Ministry of agricultural food and forestry policies. The authorities concerned shall implement the provisions of this Act, except those referred to in Articles 3, 5 and 10, in human resources, equipment and financial resources available under current legislation and in any case no new or higher charges for public finance¹³⁸.

¹³⁶ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 16.

¹³⁷ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 17

¹³⁸ 'Legge 1 dicembre 2015 n. 194 Disposizioni per la tutela e la valorizzazione della biodiversità di interesse agricolo e alimentare' ART. 18.

3.5 Considerations on Italian policies

As for we have analyzed so far, the choice of GMOs is not and will never be a valid choice for Italian agriculture, under several points of view. As a matter of fact Italian territory, as the rest of the world, is witnessing a loss of biodiversity not only caused by pollution, by rising temperatures and the use of toxic pesticides, but also caused by GMOs. As well known, because pollination expands on the adjacent land there is the danger of crushing and extinction of the original species. On an economic point of view we can not think that we could really compete against China or other Countries with a large territorial extension using ourselves GMO's, this remains only a mere illusion. Italy, mainly composed of small and medium-sized agricultural firms, except in some cases micro businesses, could never internationally compete on production volume, thus leading to the failure of this fundamental element of our economy. Moreover Italy has always based its cuisine and its export on the idea of high quality dishes with fresh products and impossible to be found out of our Country. Losing the excellence of Italian food by using GMO's would certainly lead to a decline of its perception by the rest of the world and would be detrimental to our exports. Our cuisine is envied all around the world and Italian restaurants are always seen as a warranty of taste and sophisticated food and wine. Based on these considerations and economic and scientific data and on the policies acted by the recent Governments, our battles in Europe and at international level served not only to defend our products or to gain more through the export, but they also have a great significance as both international political affirmation and defense and export of the fundamental values of Italian culture. This affirmation, underlining the strength and excellence of a Country, brings to a further reinforcement of its position on the table of international diplomacy. There is no aspect of diplomacy and relations between states that could be underestimated, and as we could see in the first chapter, Food Diplomacy has been of primary importance in many fundamental negotiations. I think that what has been

done until now is only the beginning and a small step for Italy. On this subject, there is still much to do, and I hope that the will to carry out a project that would give more prestige to Italy at the international level will not lack. Italian culinary heritage is so enormous and varied that any carelessness on it would be an unforgivable mistake.

CONCLUSIONS

As I pointed out in my work, the connection between diplomacy and food has always been very strong in history and too often underestimated. Many negotiations and many relationships have been strengthened through the application of Food Diplomacy, while others have failed by ignoring this aspect that is rather essential for the strategy of each Country. After the Second World War, and even during it, many States began to find new ways to export their own set of fundamental values, acting on the collective imagination. This strategy created in the minds of the people of other Nations a kind of idyllic image that convinced them of the correctness of those models. There are many examples of that, we can start from the field of music, passing through the Cinema factory, landing to the phenomenon of comics both in the United States of America and the manga for Japan. Food Diplomacy is one of those soft power 'tools' extremely effective and versatile, already applied by many Countries, that understood its importance though they have not a traditional cuisine as extensive and ancient as we have. Unfortunately only in recent times Italy understood the true potential of this strategy and began to invest time and resources in this area. In my opinion, this can be the right direction to bring further growth and development to our Country by boosting the export of our products abroad. I believe that the true value of Food Diplomacy, is by the way, the export of the distinctive values of Italian culture. This concept is fundamental for various reasons, either the destruction of prejudices, unfortunately ever-present, or the improvement of the relations with other States. This is true both for an institutional level and for a social level so that we can oppose the erroneous beliefs on our products and their use so common in other Countries, and by that we can also fight against the numerous counterfeits that our products are withstanding.

In the chapter dedicated to biodiversity we have seen how bravely Italy defended its agro and animal biodiversity against the use of GMO. This great success in the international scenarios had been possible only because Italy had a very strong and clear idea on this subject and had already regulated this by law inside its borders. Unfortunately this is not the habit. In the past Italy has in fact ignored to pay attention to what was happening in its own territory and this led to an incapability to defend even the national food sector. An example of this could be that of Sicilian 'Tonnare'. A few years ago it seemed that the Mediterranean tuna were endangered. Hence a reduction in tuna fishing was imposed in our seas by ICCAT, the International Commission for the Conservation of Atlantic Tunas, the world authority on tuna fishing. Today, according to the denounce of the Sicilian fishermen, the presence of these pelagic fish has increased to a level that the number of sardines and anchovies, which are the main food of tuna, is sensibly reduced. Not to mention the fact that while the ships of Italian fishermen are blocked in ports, the Japanese ships are allowed to fish tuna undisturbed in our seas. Is it fair to allow such a thing? Where is Italian care about the defense of our products and economy? Another example that I think is important to mention is that of hydroponic tomatoes in the Netherlands. When there was the discussion on this topic at the Commission of Agriculture of European Parliament, the subsequent decision was to assign to the Netherlands the opportunity to produce and export the majority of tomatoes around the EU. I do not think that was definitely the most appropriate place from a climatic point of view and from a cultural point of view. ? I do not think you can never compare the taste, quality and uniqueness of a Pachino, San Marzano or Piennolo tomatoes with artificial cultivated in greenhouses. Where were the Italian members of European Parliament? Why didn't they fight hard to defend our agriculture and producers and what could be a great source of income by the promotion of Italian products? If we are not the first to try to protect our uniqueness abroad, who ever will? This would be possible only

through a clear and defined classification and certification of each aspect of Italian food production. As a matter of fact also in Italy, there is no clear distinction in methods of production of certain products for which our Country is unique. A clear example is provided by the case of ice cream in Italy. As for years the SIGA(Italian Ice cream Makers Association) has been complaining that in Italy there is no real definition of ‘ Artisanal ice cream’, in terms of ingredients and the procedure needed to use this definition. This is creating a great confusion and even leading to the consumer deception, often foreigners, because without a regulation every ice cream maker could put a sign selling ‘ gelato artigianale italiano’ while using chemicals to produce it, putting it to the same level of those using fresh and more expensive product in order to offer one of the best ice cream of on the market. Obviously the result is a significant loss of credibility in the consumers. I therefore believe that if Italy wants to go ahead in this area, crucial for its economy and relations, should pay more attention to the solving of internal problems. The sum of every little opportunity ignored or left behind, could create significant losses for our Country, both in terms of economy and international credibility. Fortunately this trend is reversing and now Italian policy is trying to control all the field Italy is involved in especially in the way our cuisine represents our Country abroad, thanks to EXPO Milano 2015 and to other initiatives that we have seen above. I think this is the right way forward for our Country if we want to continue to grow and impose ourselves as excellence, which we already are, in this area and ensure they can exploit this position in relations with other States. We have already made the first steps on the right path with initiatives such as 'The Week of Italian Cuisine in the World' and the creation of the brand 'The Extraordinary Italian Taste', but we should try to push further and maybe promote the cooperation between several Ministries to develop new projects. I personally believe that a possible new entry in the cooperation between the previous Ministries could be the Ministry of Culture and Tourism (MiBACT) as the most logical partner towards the way to

development. The creation of holiday packages in which tourists will visit our Country while enjoying our cuisine and our beautiful scenarios, our history and culture. At the same time they could visit farms or factories for the production of buffalo mozzarella, or where the cinta Senese pigs are bred and processed. This would be a further incentive for foreigners to come to Italy to learn directly what the Italian cuisine is and to see with their own eyes the care and professionalism that we put on the creation of our products. It would be nice to recreate an ancient Roman typical meal and allow visitors to feel a little more Italian for a day. And this kind of feeling is not to be underestimated, given that this is one of the most important aspects of the use of the Food Diplomacy: entering the heart of people passing through the stomach. The immediate effect of Food Diplomacy would be a great boost in our economy, but the most important and deep effect would be the creation and reinforcement of the encounter and relationships with other cultures in the long period. This result could be translated in a stronger perception that the other countries will have of Italy on diplomats tables, giving them a positive and friendly image passing through our food and through a well executed Food Diplomacy policy.

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ABSTRACT

In this work I will analyze a subject that in recent years is having a significant development in our Country, as well as a great impact on our foreign policies and on the way Italy is perceived abroad. Food Diplomacy is the use of food heritage, and the resulting culture and history behind it, related to other States. Its intent goes from simple ‘soft power’, to the promotion and improvement of the idea of how a Country is perceived out of its borders, looking to improve the export sector. This diplomatic use of food, in fact, has ancient roots, it can be assumed to have its origins in ancient Greece and from then throughout history and places it has evolved and it is now characterized by different facets. In recent times the first to use it were the Eastern Countries, such as China, South Korea and Japan. The use of this discipline was initially seen as a new ‘soft power’ tool made to export a cultural model abroad. Only recently Italy began to intensify and benefit from its food culture, the quality of its products and the strong impact that the local cuisine has on the collective. In fact since 2010, when UNESCO recognized the Mediterranean diet, and especially the Italian cuisine as a World Heritage, many efforts have been made to promote, strengthen, protect and raise awareness of one of the jewels of our Country. In the first part of this paper I will analyze the history and evolution of the Food Diplomacy, its roots and the old and new features of this matter. Food is an essential part of our lives, representing history, traditions, and culture of any Country. Each of us depend on food to not only survive, but also to comfort ourselves, communicate with others, and link us to our ancestors. As Brillat-Savarin knew, food is a fundamental way in which nations affirm their identity — national cuisine is a marker by which a people self-identifies. ‘As American as apple pie’, for example, not only includes the comparison with patriotism, but inextricably connects the nation with the food, never to be separated. The power and connection of food and nationalism brings us to take in account the potential of using this link as an instrument of international relations. This thesis would try

to define the concept, which is here called ‘Food Diplomacy’, as the use of typical food and dishes as an instrument to create cultural understanding with the purpose of improving cooperation among Countries. The art of entertaining foreign diplomats and other representatives with national cuisine, is as old as diplomacy itself, but as an official theory and method to conduct diplomacy it is quite new. As this thesis will show, however, the use of Food Diplomacy is spreading and there are requirements for a further expanded use in the future. The idea at the base consists of two distinct but interconnected facets: public and private Food Diplomacy. Public Food Diplomacy goes under the guidance of public diplomacy, and more specifically, cultural diplomacy. It is worth noting that Public Food Diplomacy is exemplified by governmental outreach programmes like those undertaken by the Thai and South Korean governments. Private Food Diplomacy, on the other hand, takes place behind closed doors. Commensality, from the Latin ‘the act of sitting at the table together’, is essential to diplomatic discussion. While public dialogue and large conferences can bring about decision-making, the best negotiation and conversation often happens away from the public eye, over a meal or a drink. This difference, between public and private Food Diplomacy, will help in our understanding of what makes this instrument so strong. Food Diplomacy must not be confused with other formal connections of food and culture, or with other uses of food in diplomacy. Concerning the former, Food Diplomacy is not simply a tool of intercultural relations that makes relationships easier between people from different cultures. It does give some theoretical basis from intercultural communication, but it is strongly grounded in diplomacy theory. We will explore the nascent field of Food Diplomacy, about which there is few academic scholarship. Using a combination of first-hand interviews, news sources and extrapolation of what research has been done until now, the thesis will attempt to analyze what is done until now and create a basis for future scholarship discussion proposing Food Diplomacy as an effective and practised form of diplomacy that

gains its authority because of its use of food to unite, engage and feed both friends and enemies. The section on history will start with a discussion of ancient Greece and Food Diplomacy in pre-history, and will turn to illustrate French influence on modern Food Diplomacy. The theory of the field is not deeply researched, but the work will propose that such a theory can be formed using a combination of the current thinking on public and cultural diplomacy, including non-verbal forms of communication, along with contact theory, a concept borrowed from the field of conflict resolution. The practical applications of Food Diplomacy are very different and wide-ranging. For instance, some governments, mostly in South-east Asia, have been establishing culinary outreach politic programmes for nation branding purposes. Others have been using food as a tool of cultural exchange. At the top of such exchanges is the Club des Chefs des Chefs, a body of chefs of heads of state that meets periodically to discuss about Food Diplomacy and their influence on it. This high-level meeting exemplifies the importance and merit of Food Diplomacy, for behind each successful leader is a supportive chef and a body of national cuisine with which to win hearts, minds and stomachs. We will analyze the work of several scholars: Costas Constantinou and Raymond Cohen about the discussion on the non-logocentric aspects of Food Diplomacy, and its use as a nonverbal signal on the diplomatic stage; to the work of Paul Rockower, who popularized the term ‘gastro-diplomacy’ to discuss the concept, and has written about the public diplomacy of food through the practice of nation-branding; to theories of public and cultural diplomacy, which borrow heavily from ideas of nationalism. There will also be added concepts of soft power, found in the work of Joseph Nye, as well as the contact hypothesis of Gordon Allport. The theory as a whole combines both public and private aspects of Food Diplomacy, and focuses in particular on the concept of commensality.

In the second part I will describe Italy's path that led to the current Italian policies in the field of Food Diplomacy, starting from the biggest event that was the stage for our strong international presence in this sector: the EXPO Milano 2015. I will analyze the ideas behind the EXPO and the projects that were created soon after the event and the effects that those had on our Country. As read on the official site of the event, the primary objectives of Expo 2015 were:

- To strengthen the quality and security of food, ie the security of having enough food to live and the certainty to consume healthy food and drinking water;
- Ensure healthy and quality food to all human beings to eliminate hunger, thirst, infant mortality and malnutrition that afflict 850 million people on the planet, abolishing famine and pandemics;
- Preventing the new social diseases of our time, including obesity, cardiovascular diseases, from tumors to more common diseases, enhancing the practices that allow the solution of these diseases;
- Innovation through research, technology and enterprise of the whole food production chain, to improve the nutritional characteristics of products, their storage and distribution;
- Education in proper nutrition and encouraging more healthy lifestyles, especially for children, adolescents, the differently able and the elderly;
- Enhancing the knowledge of "food traditions" as cultural and ethnic elements.

During the months of the Expo, issues related to the technologies applied to the food sector were also addressed, focusing in particular on:

- Preserving biodiversity, respecting the environment as agriculture ecosystem, protect the quality and safety of food, education in nutrition for a person's health and well-being;
- Identify the best tools for control and innovation, from biotechnologies that do not represent a threat to health and the environment, to ensure the availability of nutritious and healthy food and water for drinking and irrigation;
- Ensure new food sources in areas of the world where agriculture is not developed or is threatened by desertification of land and forests, from drought and famine, impoverishment of fish in rivers and seas.

Great importance was also given to the value of food as a cultural expression and socialization vehicle, in addition to issues related to agricultural production, catering and research centers; particularly the Expo debates will cover:

- the value of innovations and production technologies that generate a healthy food product;
- the presentation of techniques concerning the preparation and storage of food, increasing the professional skills and improving communication with the consumer;
- ensuring the quality of food with appropriate systems of protection and monitoring of counterfeiting and adulteration.

It is in the spirit of respecting these issues and at the same time to develop and promote Italian cuisine abroad, that the first steps that subsequently lead to the development of the 'Food Act' and a series of protocols and initiatives to promote the Italian culinary culture abroad were born. The first and most significant act carried out by the Ministry of Food Farming and Forestry Policies was definitely the presentation on

May 27, 2015, held at EXPO Milan, a unique hallmark for Italian food and agricultural productions: 'THE EXTRAORDINARY ITALIAN TASTE'. This brand serves to promote Made in Italy food, under a single banner, and contrast the Italian sounding. A logo that will be used at international fairs, in promotional activities within the sale of the large foreign distribution points, in the communication and promotion campaigns on TV, on traditional media, on the Internet and on social media. A single sign useful for vehicular unitary idea of Made in Italy by the original and distinctive quality features. In exhibitions, for example, it serves to characterize uniquely the exhibition area dedicated to Italy food and wine. The brand will be used right from within the next few days of the Wine and Food Pavilion at Expo, just to seize the unique opportunity of visibility offered by the event in Milan. The Food Act is a plan of action of the Government for the promotion of Italian cuisine presented by Minister of Agricultural policies Maurizio Martina. Agriculture at the Expo in the second Forum of Italian cuisine in the presence of more than 40 most renowned chefs in Italy and Ministers of Education, University and Research Stefania Giannini, of Heritage and Cultural activities and Tourism Dario Franceschini. In order to achieve the objectives of the plan, the Forum of Italian Cuisine is set up as a permanent working organization and a comparison between the experiences of Italian haute cuisine and the main institutions. The Forum will be coordinated by the Ministry of Agricultural Food and Forestry Policies, and will meet at least three times a year. The meetings will be attended by the Ministry of Foreign Affairs, the Ministry of Heritage and Cultural Activities and Tourism, the Ministry of Economic Development, the Ministry of Education, University and Research, the Ministry of Labour and Social Policies, the Conference of Regions and autonomous Provinces, ANCI, operators and other entities and public organizations interested in the matter. The Food Act states the first actions of feasible systems coordinated by the institutions in synergy with the main players of the Italian food and wine experience. In relation to every action a main

subject has been identified with specific focus and dedicated working groups. Quality, identity, excellence. Three key words of the first 'Italian Cuisine in the World week', a legacy of Expo Milano 2015, to support the agricultural food business and industry professionals who elevate Italy's name abroad. The project is included in the action plan which deals with the Ministry of Foreign Affairs and International Cooperation, the Ministry of Agricultural Food and Forestry Policies, the Ministry of Education, in collaboration with the Ministry of Economic Development. A process that began on March 2nd , 2015 at Universal Expo with the first forum of the Italian cuisine, which was followed by the signing of the Food Act - the first pact between institutions and the world of cuisine - July 28th , 2015 and the Memorandum of Understanding for the promotion of quality Italian cuisine abroad signed at the foreign Ministry on March 15th, 2016.

In the last chapter of the thesis I will present what is biodiversity, why it is so important and the reasons why Italy has always defended this fundamental value for its cuisine and tradition. I will consider the difficult relationship between GMOs and biodiversity and the danger that this genetic manipulation represents and the Italian battle against GMO crops. Biodiversity is usually defined as a variability among living organisms identified in three levels: diversity inside species (genetic diversity), among the species and relating to ecosystems. The debate on biodiversity is wide open on a global scale, from the identification to the protection, from the preservation to the exploitation. The sequence of meetings to create regulatory measures, not so many indeed, ended up to the signing of international agreements. This allowed a clarifying and unambiguous way of identifying what biodiversity is inside the agreeing countries and inside the countries members of the EU. This is a statistic impossible to deny: industrial forms of agriculture, with emphasis on large-scale monoculture crop production, have a negative impact on biodiversity. The Food and Agricultural Organization of the United Nations, referring to the scale of the loss as “extensive,” found that some

75 percent of plant genetic diversity has been lost since 1900 as farmers decided for a genetic uniformity on mass-produced crop varieties. Since genetically modified crops (a.k.a. GMOs) reinforce genetic homogeneity and promote large scale monocultures, they contribute to the decline in biodiversity and increase vulnerability of crops to climate change, pests and diseases. Genetically modified crops grow in a dynamic environment and interact with other species of the agro-ecosystem and surrounding environment. As 'biological novelties to the ecosystems', GM crops may potentially affect the *'fitness of other species, population dynamics, ecological roles, and interactions, promoting local extinctions, population explosions, and changes in community structure and function inside and outside agroecosystems.'* Many people today take for granted where the foods they eat comes from. In fact, genetically modified foods have become a commonplace thing in America, even though few people understand what "genetically modified" means. While there are some economic benefits that genetically modified foods may offer, there are also several risks and negative effects that these foods can cause as well.

When the term "genetically modified" is used to describe a food, it means that the genetic makeup of one of the ingredients in that food has been altered. This is achieved by a very special set of technologies that combine the genes from different organisms, with the resulting organism being called a genetically modified food. In most cases, the specific genes that are combined have been hand-picked for the specific traits that they have. Those traits could include everything from the resistance to insects to a specific nutritional value. These genetically modified foods can be found in many crops, from corn to canola oil, which are quite common ingredients in many foods found on the market today such as snacks, cereals and sodas.

Finally I will analyze the whole legislative process and the diplomatic and bureaucratic battles waged by Italy and its efforts to convince Europe and the rest of the world to stop using this technology and promoting conservation and implementation of biodiversity. Let's start off by reiterating the concept that as usual Italian politics collided against the use of GMOs for its crops, both by the various governments and by citizens who have always looked with an eye of suspicion this kind of 'evolution' in agriculture. What in fact distinguishes the local products has always been the quality rather than the quantity, as well as traditional methods to produce them. The technology has been increasingly used, and only in order to improve these methods, but without distorting the final product in its shape, size or growth rate. For these reasons, we have often been in opposition against the European Union, above all in the early 2000s with the adoption of Directive 2001/18 / EC that inserted GMO crops in member states. Thanks to scientific studies and battles both on the political and on the legislative and thanks to the involvement of other States against the introduction of GM crops, Italy has always managed to defend the quality and safety of its agricultural products until obtaining a real big victory in 2015 when Europe issued the directive (EU) 2015/412 of the European Parliament and of the Council of 11 March 2015. This directive was to amend the previous regulation regarding the possibility for Member States to restrict or prohibit the cultivation of genetically modified organisms (GMOs) in their territory. Well-timed was the request made by Minister Maurizio Martina, in consultation with the Minister Gian Luca Galletti and the Minister of Health Beatrice Lorenzin, sent to the European Commission requests for exclusion of the whole Italian territory from the cultivation of all GMOs authorized at European level. This success was only the tip of the iceberg of the will of Italy to defend its products and culture from external aggression in this specific area that has always been a pride for our Country. As we have previously noted, plans and projects have arrived and have been a huge success both nationally and internationally.

Expo Milano 2015 and all of the cuisine initiatives made to protect Italian culture that could also be revolved into several satellite activities bringing a new economic boost. Moreover, among these initiatives definitely one that gave greater protection and guarantee to products and to the Italian agricultural sector was the Law of 1 December 2015 n. 194 concerning the arrangements for the protection and enhancement of biodiversity for food and agriculture interest.

I will conclude with my personal considerations, making a prediction on future developments and uses of Food Diplomacy in Italy, trying to give my personal opinion on how some aspects of the various initiatives undertaken so far can be improved. The connection between diplomacy and food has always been very strong in history and too often underestimated. Many negotiations and many relationships have been strengthened through the application of Food Diplomacy, while others have failed by ignoring this aspect that is rather essential for the strategy of each Country. After the Second World War, and even during it, many States began to find new ways to export their own set of fundamental values, acting on the collective imagination. This strategy created in the minds of the people of other Nations a kind of idyllic image that convinced them of the correctness of those models. There are many examples of that, we can start from the field of music, passing through the Cinema factory, landing to the phenomenon of comics both in the United States of America and the manga for Japan. Food Diplomacy is one of those soft power 'tools' extremely effective and versatile, already applied by many Countries, that understood its importance though they have not a traditional cuisine as extensive and ancient as we have. The immediate effect of Food Diplomacy would be a great boost in our economy, but the most important and deep effect would be the creation and reinforcement of the encounter and relationships with other cultures in the long period. This result could be translated in a stronger perception that the other countries will have of Italy on diplomats tables, giving

them a positive and friendly image passing through our food and through a well executed Food Diplomacy policy.

It would be great if any person coming in touch with our cuisine and typical products could feel a little bit “Italian”. This kind of feeling is not to be underestimated, given that this is one of the most important aspects of the use of the Food Diplomacy: entering the heart of people passing through the stomach.