## FEEDING THE PLANET: BETWEEN FOOD SECURITY AND FOOD SAFETY

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Abstract: The issue of food is indeed a systemic problem involving fundamental aspects of the social, cultural and economic organisation of our planet. This paper focuses on the main aspects related to the concepts of food security and food safety. While the first problem mainly affects less developed countries, the second concerns diet in the developed world. They are influenced by important factors such as the structure of food distribution, the effective access to food resources, the lack of confidence about the safety of the products, and the different consumption behaviours affected by social, economic and religious factors.

Keywords: food security, food safety, food distribution, consumption behaviours, food resources.

The theme behind Milan's Expo 2015 goes far beyond the subject of food, leading us to examine fundamental aspects of the social organisation of modern life.

The first problem concerns food security which, according to the FAO, "exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (World Food Summit, 1996).

After the Second World War, governments and international organisations began to seek an answer to the problems linked to an insufficient availability of food, especially in developing countries, promoting policies to increase the number of lands devoted to agriculture. These initiatives met with only partial medium and long term success, and in the end it has to be recognised that an approach focused only on production is not enough to shape an effective response to the problem (Lang, Barling 2012).

The current preference is for food systems, a concept that encompasses many other elements, all important factors in ensuring safe access to food. One crucial aspect is



the organisational structure of food distribution: the production of foodstuffs in a particular area does not always mean that the local population will have access to them. The simplest example of direct access to food from selfproduction, where people cultivate the products they consume, seems to be geographically limited and restricted to a handful of products. Even in less developed areas forms of exchange and trade of varying degrees of complexity regulate the effective availability of food products (Gregory, Ingram, Brklacich 2005). In the advanced industrial societies the food distribution chains have become long and extremely sophisticated. A study by Grienvik in 2003 showed that distributors are crucial to the functioning of food product chains. A food product chain pyramid serving 160 million consumers will be constructed on a foundation of around three million direct producers. The distribution chain that transfers these products to the final consumer is, however, controlled by around 90,000 producers/processors and one hundred large buyers for the supermarket chains (Gregory, Ingram, Brklacich 2005; Grievink 2003). In other words, today's food systems have the shape of an irregular hourglass: a large base of producers, a narrow centre section controlled by a limited number of operators and an exaggeratedly large upper section formed by millions of consumers. In this situation large distributors and producers have a decisive influence on the market.

Another problem concerns effective access to food resources. The actual availability of foodstuffs obtained directly from producers or more frequently through distributors, does not necessarily lead to its consumption. This is influenced by cultural, social, economic and religious factors, which can take many forms. For example there are taboos that limit or forbid the consumption of various types of meat. Judaism and Islam forbid the consumption of pork and other "impure" animals, Hindus not only don't eat meat from cows, but also during many periods of the year they have to observe a partial or total fast. Not forgetting taboos related to eating pets; animals like cats and dogs that are considered part of the family usually are not eaten. There are, though, some exceptions. Horse meat, for example, is eaten in many areas of the world, including the Mediterranean, but this practice is



often considered with horror by the people of Northern Europe, where owning a horse, hunting on horseback and show-jumping are extremely widespread. Taboos surrounding the killing and the bloodshed of animals may be the most common, while there are others like for instance eating insects, that is regarded with disgust in many parts of the world. In Western culture, insects are seen as a source of impurities, dirt and illness. However, in other parts of the world insects like butterflies, crickets and locusts are eaten without hesitation. The FAO has calculated that there are around 1,900 edible species consumed around the world, and this figure is steadily rising (FAO/WUR 2013). In short, cultural factors impose rigid distinctions between what can and what cannot be eaten, establishing a strict hierarchy of foods that are good to eat (Harris 1998).

The social structure can create further problems. We know that the sharing of food within a culture usually reflects the social hierarchy, with the élites usually have access to more and better food than those further down the ladder. In late-nineteenth century a survey on Italian families' food consumption in various regions of the country painted a picture of hypocaloric diet mostly composed by polenta, cornbread, dried vegetables, potatoes and a few green vegetables (especially in the central-southern areas), with a little adding of wheat and almost no meat and animal protein. At the same time, richer families ate large meals based on bread made from wheat flour, meat, especially beef, dairy products, fruit and fresh vegetables. Only in the 60s these social divisions began to disappear in Italy (Scarpellini 2012).

A complex, unequal reflection of the social hierarchy also exists within families. Extensive research and oral history tell us that in farming families, the head of the family took precedence in the distribution of food. Children and especially women were given less tasty and nourishing food, and in smaller quantities. In 1942 one of the few official surveys on the female diet in Italy analysed the diet of five teams of rice weeders at work. The meal provided these 350 women with around 3,000 calories per day, while the figure for men who worked alongside them was over 4,000 calories (Somogyi 1959). Similar



situations have been documented in many other parts of the world

The conclusion that could be drawn is that food security is now a problem that primarily affects less developed countries with dramatic implications. The FAO has estimated that in 2012 there were 870 million malnourished people in the world, the equivalent of 12.5% of the global population (FAO 2012). However, it would not be correct to say that this phenomenon is totally absent in the most developed countries. Poor nourishment does exist there, when compared with local living standards. The economic crisis that hit many western countries in 2008, with a corresponding widening of the income gap, has in fact created new areas of poverty across vast swathes of the world.

The most important problems concerning diet in the developed world concern food safety. During the 80s a series of serious food crisis have started: the epidemic of bovine spongiform encephalopathy ("mad cow disease"), the dioxin-contaminated chickens, bird and swine flu, the frequent outbreaks of E. coli and the contamination of foodstuffs by toxins of agricultural or industrial origin. Safe and constant access to food has not eliminated fears about the safety of the products available. Inevitably, the extended production chains, the growing presence of foods produced by large companies using a variety of processes, transporting foodstuffs over long distances and the growing participation of the pharmaceutical industry in food production processes, have eroded the confidence and knowledge that once existed among the general public when their food was a familiar, local product. The result is a fear of food, even where no dangers exist. This has an effect on food choices among a wide section of the population, leading to a morbid preoccupation with avoiding foods perceived to be unhealthy. A number of studies have recorded high levels of this type of anxiety among Europeans, especially concerning the presence of toxic contaminants in food, pathogens in meat and contamination by containers in plastic or other materials. Not to mention questions hanging over GM products and the new nanotechnology (Scarpellini 2012, 271).

All these concerns are worsened by worries about the environmental effect of the human food chain through



exploiting non-sustainable resources and creating environmental pollution. Given the modern food system structure, humankind's ecological footprint has long since outstripped the planet's ability to replace what we take out of it.

In this context, feeding the planet is a global challenge, or rather, glocal, as it must include, on the one hand, an integrated, sustainable approach that can reconcile transnational economic dynamics with local sociocultural factors, and, on the other, the respect for the needs of small producers and large distributors. This is the right approach both to address problems affecting less developed countries, and to tackle new concerns in more developed areas. Basically, providing a response to all this means highlighting the most profound values and choices that underlie our social organization.

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