

# Let dietitians and nutritionists make a contribution in guiding consumers toward environment friendly choices!

Francesca Tabacchi

## ABSTRACT

In recent years, the collective effort toward a green economy and zero food waste production has been remarkable. The European Union (EU), along with other International Organizations, has never been so motivated to act and fund green initiatives. Covid-19 was a powerful wake-up call for all countries to realize the risks that climate change and human activities can bring. Ultimately, it is undeniable that daily food choices are up to the consumers and community services: they do have the power to influence the market with their demand. Therefore, it seems fair to question whether it would be possible to further increase consumers' awareness through educational activities conducted by nutrition experts. This paper highlights critical areas in consumer awareness that could be implemented in order to guide citizens toward choices that are compatible with sustainability and waste prevention and, ultimately, with the survival of the planet. One of the concerning issues is that consumers are still uninformed of the risks that western diets and thoughtless purchasing habits have on their wellbeing. There is still a lot of critical information, supported by scientific evidence, that is not part of people's cultural heritage yet.

**Keywords:** Food waste, Nutritional education, Sustainability

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## INTRODUCTION

Human activities, such as deforestation and intensive exploitation of resources, are having dramatic consequences on the environment. According to the Global Footprint Network, Earth inhabitants are actually consuming more resources than the planet can regenerate [1]. For this reason, many states and supranational organizations have taken measures and signed commitments to improve the current situation: not all of them however are keeping their promises.

The Climate Agreement signed in Paris in December 2015 has the ambition to limit the global temperature rise, in this century, to less than 1.5 °C. In the same year, the heads of several states and high government representatives, meeting at the United Nations, have set up "The 2030 Agenda for Sustainable Development." The agenda includes the 17 Sustainable Development Goals (SDGs): a call to all countries of the world to fight poverty and improve the conditions of the planet and of its inhabitants.

Oppositely, the UN Environment Program (2020) shows that every year an estimated 11.2 billion tons of solid waste is collected and the decay of the organic proportion of it contributes to about 5% of the global greenhouse gas emissions. According to a recent study,

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the estimated food waste in the EU is 88 million tons of which 53% in households [2]. Evidently, a significant share of emissions comes from uneaten food, lost in the supply chain, or wasted by consumers. These data is alarming and completely inconsistent with the above-mentioned Sustainable Development Goals.

In December 2019, the EU Platform on Food Losses and Food Waste has issued a series of Recommendations for Action. These Recommendations are addressed to all stakeholders within the different stages of the food chain, who are called to achieve the global food loss and waste targets.

Key points of the Recommendations refer to consumer education, and state that: “public authorities should consider how to integrate objectives and messages of campaigns and other interventions across sectors (e.g., sustainable diet and health, food waste prevention, climate action) for maximum impact and efficiency.” It also asserts: “In implementing national strategies to prevent food waste, Member States should make full use of latest findings of behavioral science research and experience gained in other sectors (e.g. public health) to design effective interventions to curb consumer food waste” [3].

Summing up, everyone agrees that industrial food systems are not sustainable anymore. It is no longer acceptable to delay the development of an efficient productive system that lowers the number of external inputs, pollution, and waste. First, consumers need to be more educated on sustainable diets and how to avoid waste. Second, a circular process must be sought to transform waste into valuable resources that can be utilized in other parts of the ecosystem. Sustainable diets and food choices are not only impacting individual wellbeing and health, but they also affect the public health system and global sustainability.

To achieve these goals, efforts to rise consumers' awareness should be directed toward effective means of communication and reliable sources of information.

Food is one of the few industries relevant to every human being in every part of the world: education toward healthy nutrition and sustainable consumption should reach out as many people as possible.

## Consumers' education toward health and environment

According to the definition of the WHO (2020), “malnutrition, in all its forms, includes under nutrition (wasting, stunting and underweight), inadequate vitamins or minerals, overweight, obesity, and resulting diet related non-communicable diseases” [4]. Moreover, the WHO underlines that 1.9 billion adults are overweight or obese, while 462 million are underweight. It is universally recognized, through scientific evidences, that some very serious diseases such as cancer, diabetes, and

cardiovascular diseases are most definitely linked with malnutrition and obesity [5–7].

It seems that still today, despite the fact that there is a lot of talk about food on media and social media, there is a profound lack of awareness about the harms of over-nutrition and overweight [8, 9]. Unfortunately this is more frequent among the less educated groups of people [10]. Even though WHO data on malnutrition may seem to be unrelated to the issue of food waste and gas emissions, in reality they are strictly connected [11].

Over weight and malnutrition are often a consequence of an increased consumption of certain types of foods: meat, sugar, saturated fats, and ultra-processed food (UPF) [12]. Several studies show that UPFs endanger food system sustainability [13–15]. Many UPFs have a very long shelf-life and hence are sold in large quantities and on special offers. As a result, these foods often are not entirely consumed, creating waste, or, if consumed, they can contribute to malnutrition [16, 17]. If eaten regularly, they have been proved to have harmful effects on the consumers' wellbeing. This is the reason nutritional education would improve both health and environment [18].

Another very current and crucial issue is the consumption of meat, on which even scientists have given contradictory and sometimes incorrect messages, contributing to confusing consumers [19, 20]. The effects of meat production on the environment and the effects of meat consumption on health are often underestimated [21]. Recommendations from the World Cancer Research Fund are to reduce the intake of meat and especially processed meat [22, 23].

According to the United Nations, livestock contributes to nearly two-thirds of agricultural greenhouse gas emissions and to 78% of agricultural methane emissions—with cattle representing the bulk of that amount [24]. Nutrition experts are aware that meat production is very inefficient: it takes almost 8 calories and a huge amount of water to feed a cow for every calorie of meat obtainable.

Furthermore, in recent years, the trade and consumption of meat has presented serious Public Health problems. The transmission of Covid-19 itself has been attributed to meat [25]. Plant-based substitutes of meat and cell-based meat could reduce diseases transmission. These revolutionary projects are often involving nutrition experts. One of the SDGs is “Zero Hunger.” A plant-based diet could have a lower impact on the planet, feed an additional billion people worldwide [26] and prevent non-communicable chronic diseases.

If consumers were more aware of the facts mentioned above, they would approach supermarkets with a different mindset. They would understand the consequences of their purchases on their own health and on the entire planet and many would probably change habits. They would be able to reduce the demand for products like UPFs and red meat and, by doing so, they would tackle

multiple problems at the same time [27]. To this regard, several studies have shown that the use of conventional communication channels, the repetition of messages and students' education are efficient in reducing food waste and improving eating attitudes [28, 29]. National Health Services could improve their Nutrition and Dietetics Departments and medical universities could offer courses on nutrition. It is well known that healthcare professionals and doctors are keen to receive more education on diet [30, 31]. Finally, nutritionists and dietitians could work together to improve their patients' eating habits and strengthening their awareness on appropriate choices, portions, food quality, food origin, and seasonality [32–34].

Nowadays, in supermarkets there is a wide range of imported foods: although it may seem normal to be able to find any kinds of produce at all seasons, this availability carries consequences [33]. Supermarket choices, which people make driven by marketing and advertising, often lead to a lack of micronutrients and a huge amount of products being spoiled and wasted during the journey [35, 36]. Furthermore, the prices of the products for local inhabitants are increased, as the cultivation of avocados or sugarcane has shown [37]. Information about the negative impact of purchasing exotic foods and not considering seasonality does not seem to have been outspread enough to consumers [38–40].

## CONCLUSION

Healthcare professionals such as Dietitians and Nutritionists are claiming a role in sustainability education and helping consumers make responsible choices. This mission could be accomplished on several different occasions: not only in healthcare settings but also in schools, workplaces, supermarkets, and through the media. Nutrition professionals want to contribute to health and sustainability as a unified goal and they are trained for it.

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### Author Contributions

Francesca Tabacchi – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Author declares no conflict of interest.

### Data Availability

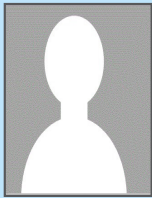
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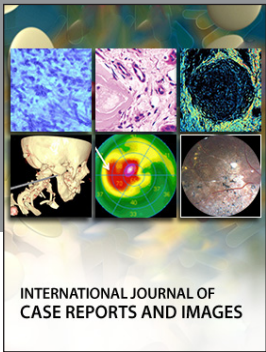
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