

HORIZON-CL6-2021-FARM2FORK-01-14

Transition to healthy and sustainable dietary behaviour

Title : Transitioning **FU**ture Diet for an Innovative Environmental friendly **SOCI**ety (Acronym : **T – FUDIES**)

BACKGROUND

The **selection, preparation and consumption of food** varies widely amongst countries and depends on a large number of factors — geographical, climatic, historical, religious, cultural, political, economic and financial — influencing dietary behaviors which are strongly and fully integrated and interdependent with biodiversity preservation, climate change, human health and wellbeing.

It is known that the **prevalence of malnutrition** (over and undernutrition) is high at all ages - especially in the more vulnerable groups like frail older persons, and impoverished populations - this situation affects health status and comorbidity, physical and social functional status, health-related quality of life and mortality. This may be attributed, at least in part, to low nutrition literacy of the population and to the effect of loss / abandonment of reference food models in favour of trends and new habits referring to new aesthetic models, to globalisation, to a new socio-economic model encompassing a different organization of work, to an increasingly abundant supply of food apparently independent of the seasonal rhythm. Moreover the **world population is expected to significantly increase** in the next years thus leading to a significant growth in food demand. Finally the **older part of the population** will increase and therefore the necessity to pay more attention to prevention strategies to avoid the fragilisation process is required.

The **EAT-Lancet Commission** has developed and launched in 2020 a scientific document on healthy diets and sustainable food production. The Commission focuses on two “end-points” of the global food system: final consumption (healthy diets) and sustainable food production.

Human health status (both at individual and population level) is significantly related to **health status of the planet** which is also threatened. The food system contributes to this situation by increasing GHG production, energy and water consumption, land use. In this historical scenario, dietary behaviour is strongly and fully integrated and interdependent with biodiversity preservation, climate change, human health and wellbeing.

Although there is substantial scientific evidence that links diets with human health and environmental sustainability, yet the absence of globally agreed scientific targets for healthy diets and sustainable food production has hindered **large-scale and coordinated efforts to transform the global food system**. In fact the **current socio-economic system** is the underlying driver of existing social and ecological challenges, with assaults on natural systems compounding the limits to wellbeing that should encompass healthy and sustainable diet.

The different organization of work and of all human activities requires more and more often and more and more people to access collective catering. This, in its various forms, now represents more than 50% of the agri-food market in most European countries and can, at the same time, affect both food supply systems (production, processing, conservation) and consumption and waste. **Food services (catering industry) (FS)** have:

- a **large distribution** in Europe and serve daily a great part of the population through school and university services, hospital and assistance catering, charitable assistance, company canteens, general population referring to deliver-at-home services;
- a relatively **planned organisation** and are asked, at least in part (e.g. in school and nursing homes), to follow national dietary guidelines proposed by local institutions.

Therefore FS may represent an important **actor in the promotion of healthier and more sustainable eating models** considering the number of consumers served daily (and the potential impact on relatives and families) and to influence the global food production chain and the sustainability of the entire agri-food system. In fact FS may

represent an important **promotion tool and a sounding board of the policies** adopted at local level to promote an healthier and more sustainable eating behaviour.

Another significant contribution to achieve healthy and sustainable diet may arrive from the improvement of **digital technologies** in food systems: international organisation such as Food and Agriculture Organisation (FAO) and the United Nations (UN) support that digital technologies can significantly contribute towards addressing the challenges faced by the global agro-food systems, at every level of the supply chain.

AIM OF THE PROJECT

Starting from nutrition and food as an ancestral need, T – FUDIES aims to create a transition model and a collaborative platform pivoting around FS (Physical and Virtual) for a healthy and sustainable diet respectful of tradition but innovative.

Catering industry will be involved as “instrument” to promote an healthy and sustainable diet considering:

- its capacity to reach an extended audience of consumers in schools, universities, rehabilitation units, nursing homes, assistance services, company canteens, home delivery systems;
- its possibility to interact with the entire agro-food system (from producers to consumers);
- its relatively constant/stable/standardised organisation that allows an easier adoption of pre-defined eating patterns/models.

PROPOSED CONCEPT OF THE STUDY

An **innovative approach to FS** will be proposed encompassing all the food chain from the adoption of a plant-based eating pattern, to the selection of local and seasonal products, to innovative sustainable food technologies and cooking techniques able to preserve nutritional characteristics of foods, to a better organisation model able to reduce wastes and/or to promote a circular economy by improving recycling/recovery of materials along the entire agri-food chain.

The project will be based on an **integrated approach to sustainability** that will be declined, within the FS, into its four main components: environmental, socio-cultural, economic and nutritional (see Dernini S, et al. Public Health Nutr. 2017;20(7):1322-1330. doi: 10.1017/S1368980016003177). Therefore FS will be involved in **promoting a healthier and more sustainable eating behaviour** of the consumers and their families/relatives (nutritional and environmental sustainability), that will lead to a better protection and economic development of the territories (economic sustainability), on the cultural growth of the entire system that will be involved in the search for greater sustainability of the agri-food system and in the protection / rediscovery of the food and gastronomic traditions of the territories (socio-cultural sustainability).

One of the major obstacles to a successful adoption of innovative practices resides in the efficiency of the process through which practices can be transferred and/or imposed. **Policy Makers and Stakeholders involvement** will be of the utmost importance throughout the entire development of the project.

With an **up-side down approach** T-FUDIES project intends to reverse radically the logic through which successful experiences are imported into a given context. The consortium believes that it is not possible to apply an “off the shelf” approach to select innovative practices but there is the necessity to analyse and consider the differences both in the environmental and economic context, and in the dietary behaviors linked to the different agri-food and gastronomic histories and cultures.

The results of the experimentation obtained through innovation in FS will finally **help local communities to design their demand towards healthy and sustainable diet**: the adoption and the co-creation of innovation and the transfer

of scientific knowledge at the local level will be supported by a **Decision Support System** sustained by Artificial Intelligence and Machine Learning. The participatory process that shapes demand is considered a fundamental factor in making innovation successfully transferable, especially between complex entities like cities.

OBJECTIVES of the STUDY

1. Have a reliable picture of policies adopted in the different countries and of adherence of target populations to an healthy eating pattern
2. Analyse the role/efficacy of strategic measures adopted in different countries on eating habits
3. Identify the determinants of food choices and their role in eating behavior
4. Analyse and enhance the role of food systems (catering industry) in promoting healthier and sustainable eating behavior
5. Transfer the policy makers a new FS model capable of improving the overall sustainability of the agro-food system
6. Foster social innovation at different levels (consumers, FS organisations, agri-food actors, media, policy makers)

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