

CO₂ BENEFITS FROM THE CHANGE OF THE GREEK DIETARY HABITS

Christina Salamaliki, Niki Matsouki, Efi Drimili, Leonidas Vatikiotis, Efthimios Zervas*

School of Science and Technology, Hellenic Open University

Introduction

The rapid population growth of recent years has led to the intensification of agriculture and animal husbandry in order to meet the world's population food needs. However, the scientific community has started to deal with the environmental footprint of the human nutrition in energy, water and carbon dioxide emissions only in recent years.

The production of food, as well as the use of natural resources, apart from the fact that they are not inexhaustible, also affect the quality of the environment, often violating the bearing capacity of the planet and contributing to the emergence and worsening of environmental problems such as the greenhouse effect, ozone hole etc.

The adoption of environmentally sustainable nutritional models with a low environmental footprint, but which will not lag behind in quality, should be the subject of study and research in the coming years.



Sustainable-Healthy Diet: The World Food and Agriculture Organization (FAO) has established this condition for diets that combine a low environmental footprint, while contributing to human well-being and the prevention of all forms of malnutrition.

Methods

The methods used to compare the carbon footprint of different dietary models are as follows:

- Substitution of animal products with plants in the Greek diet:

The carbon footprint and its reduction are evaluated, after substitution of products of animal origin with plant products by 25%, 50%, 75% and 100% in the Greek diet and a decrease of 2kg of CO₂ / cap / day is observed.

- Adaptation of 9 different dietary models to the daily per capita caloric consumption in Greece.

Comparative assessment of the carbon footprint of 9 different diets worldwide, in order to determine whether the composition and not the caloric intake itself play a key role in shaping the final carbon footprint.



Results

1st Methodology

The substitution of meat with products of plant origin leads to the proportional reduction of the carbon footprint, a fact that demonstrates the high nutritional footprint of animal food products.



2nd Methodology

The comparative evaluation of 9 dietary models, adapted to caloric consumption in Greece, also showed that the dietary models with reduced meat consumption had a low carbon footprint, while in dietary models as in the case of Argentina, the carbon footprint was increased,

The emission of carbon dioxide through the diet therefore depends mainly on the composition and quality of the food and not on the caloric consumption itself.

Conclusions

Nutrition habits worldwide should be re-examined, taking into consideration the ecological footprint of food production