

# Exploring the Role of Climate Change Knowledge in Adapting to a More Sustainable Diet

## Abstract

Our food diet affects our health, has a great impact on the environment, biodiversity and climate change. The 2030 agenda for Sustainable Development<sup>1</sup> includes the Objective 2 - "Eradicate Hunger". In this objective, it is mentioned that, until 2030, it is necessary to guarantee sustainable food production systems and implement resilient agricultural practices, which increase productivity and production, which help to maintain ecosystems, which strengthen the capacity to adapt to climate change, conditions extreme weather conditions, droughts, floods and other disasters, and which progressively improve the quality of land and soil.

There are numerous studies carried out with the purpose of assessing the environmental impact of food production and, at the same time, defining the best strategies for creating a sustainable diet. It was found that livestock breeding generates more greenhouse gas emissions than transport and that it is also a major contributor to current environmental problems: climate change, soil degradation, water pollution, ozone depletion, among others. According to the World Population Data Sheet<sup>2</sup>, in 2050 we will be 10 billion human beings to inhabit the planet Earth. One of today's great challenges is ensuring food and nutritional security in the long term, keeping global warming below 1.5 to 2.5 °C above pre-industrial levels. Thus, major social changes and a systemic transformation in our food systems are required. In view of this reality, students in the discipline of Meteorology and Climatology of the courses in Marine Sciences and Civil Protection and Risk Management at the University of the Azores prepared a questionnaire on this topic. The information collection process was carried out using a questionnaire survey, applied to a sample of the Portuguese population (continent and islands), which took place between November and December 2020.

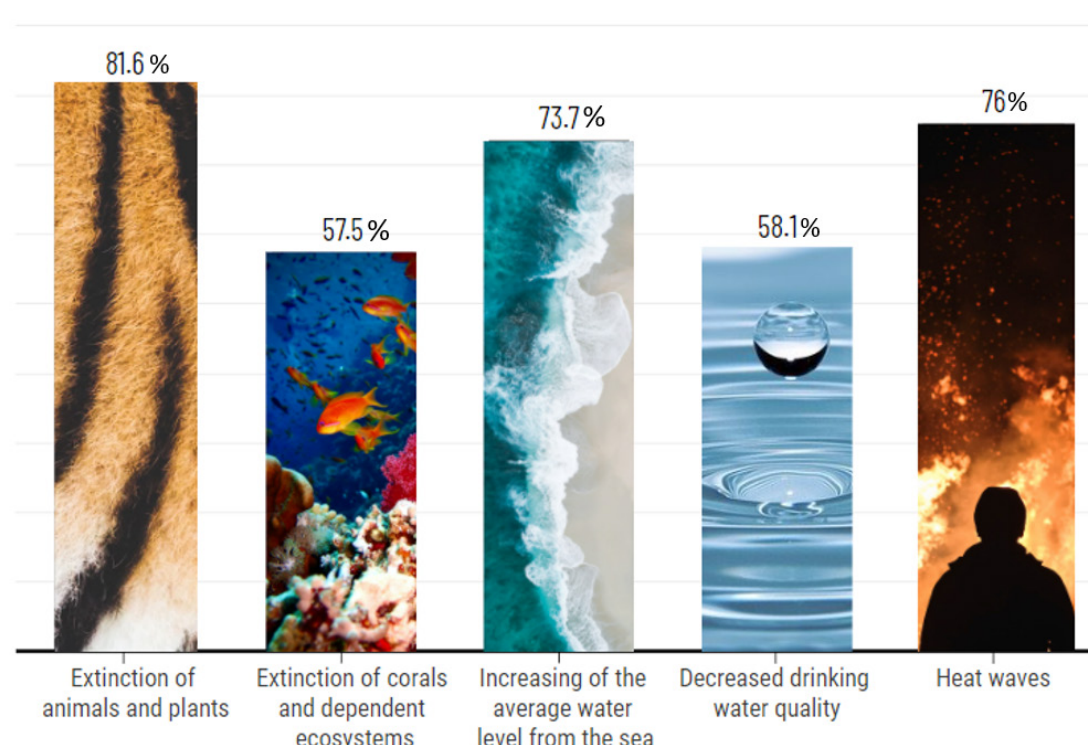
## Methodology

In the context of this study, we explored the population's perception of the climate and food theme, as a possible indicator of behavioral changes, which arouse the search for solutions to the new socio-environmental challenges. Thus, in order to understand the perceptions of the Portuguese about climate change and its impacts on the food sector, a study was carried out using a questionnaire survey, in which most of the type of questions were of a closed nature. These allow for easier data processing, but collect less detailed information. As a working tool for collecting survey questions, students used the Google Forms Platform and made it known through social networks. For the qualitative analysis of the results obtained, the data collected were analyzed with the aid of the Excel Software. For the execution of the graphics, the students used the Venngae Program.

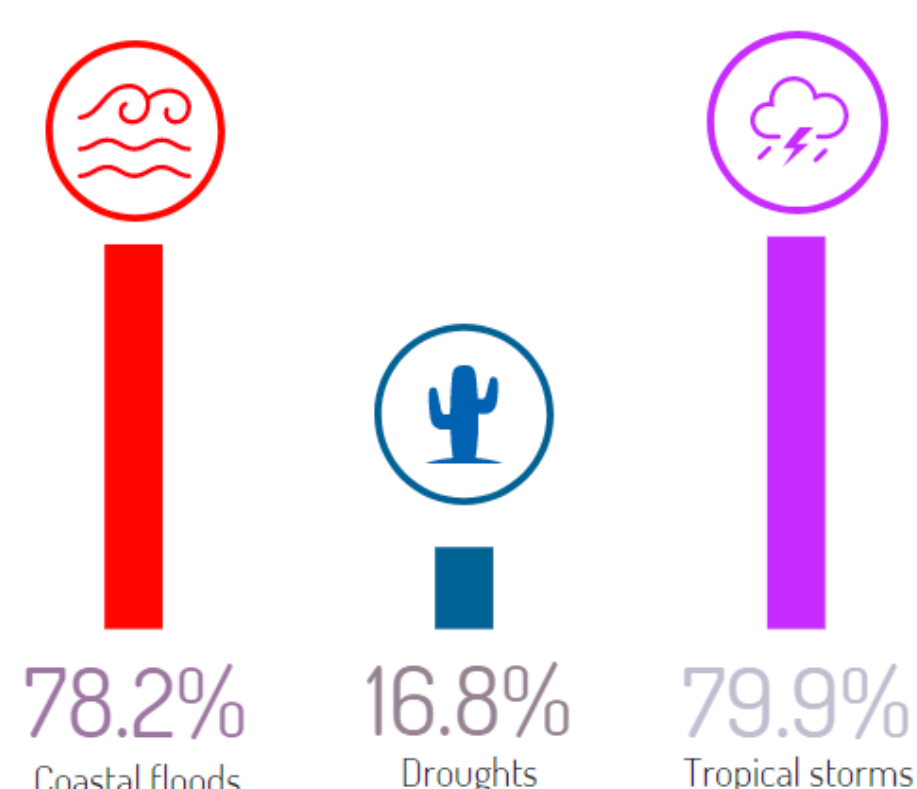
The questionnaire includes 33 questions, prepared by students of the Course on Meteorology and Climatology at the Azores University. The questions in the questionnaire refer to the respondents' perception of climate change, the degree of commitment of the Portuguese population in terms of environmental sustainability. And finally, understand what the Portuguese diet consists of and, if they are willing to change it, with the aim of mitigating greenhouse gas emissions and, consequently, climate change. As it is impossible to present on this poster the result of all the questions obtained, we selected 6 questions for the presentation of results.

## Results

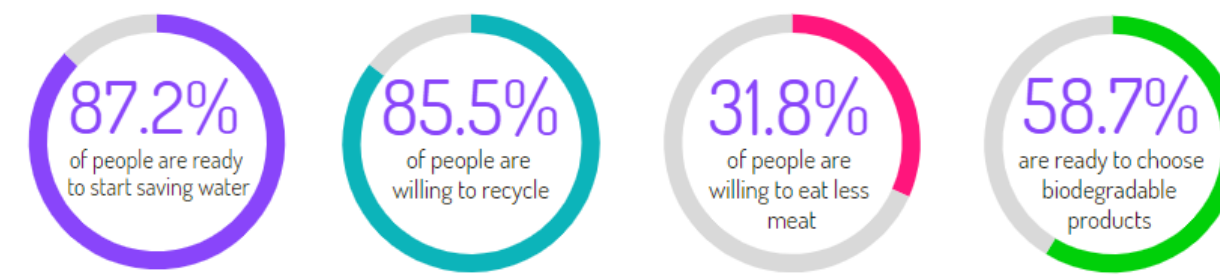
**At global level, how do you think that climate change will affect us?**



**Regarding climate change, in your opinion, which of the impacts are considered to be at greatest risk?**



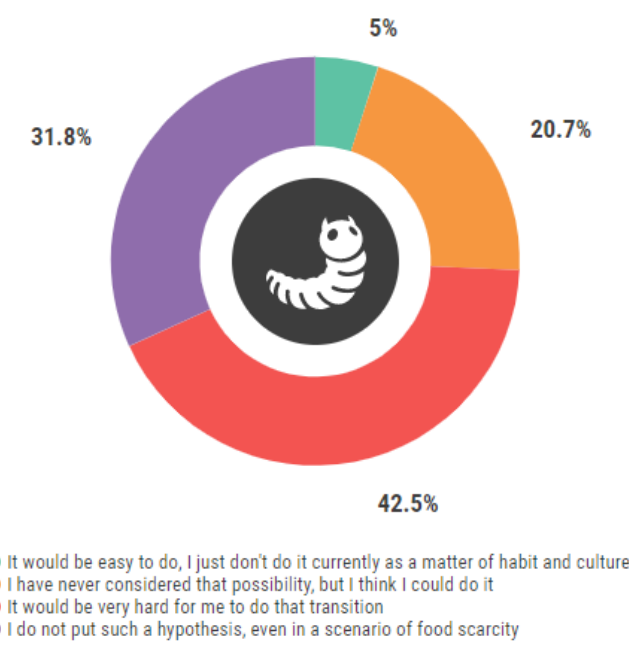
**Indicate what personal actions are you willing to take to combat climate change?**



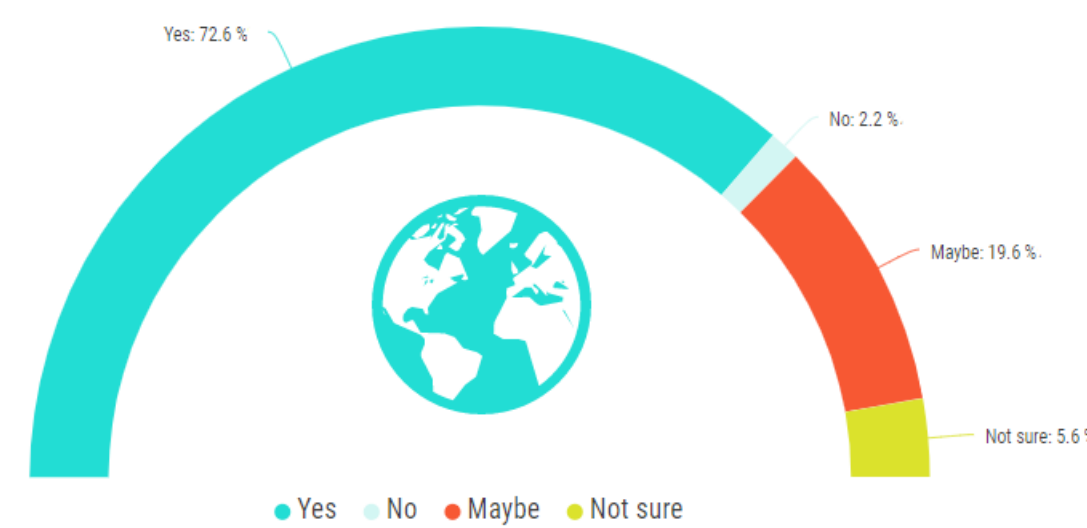
**You put the hypothesis of using insects as a substitute for meat or fish?**

### A Healthy Diet

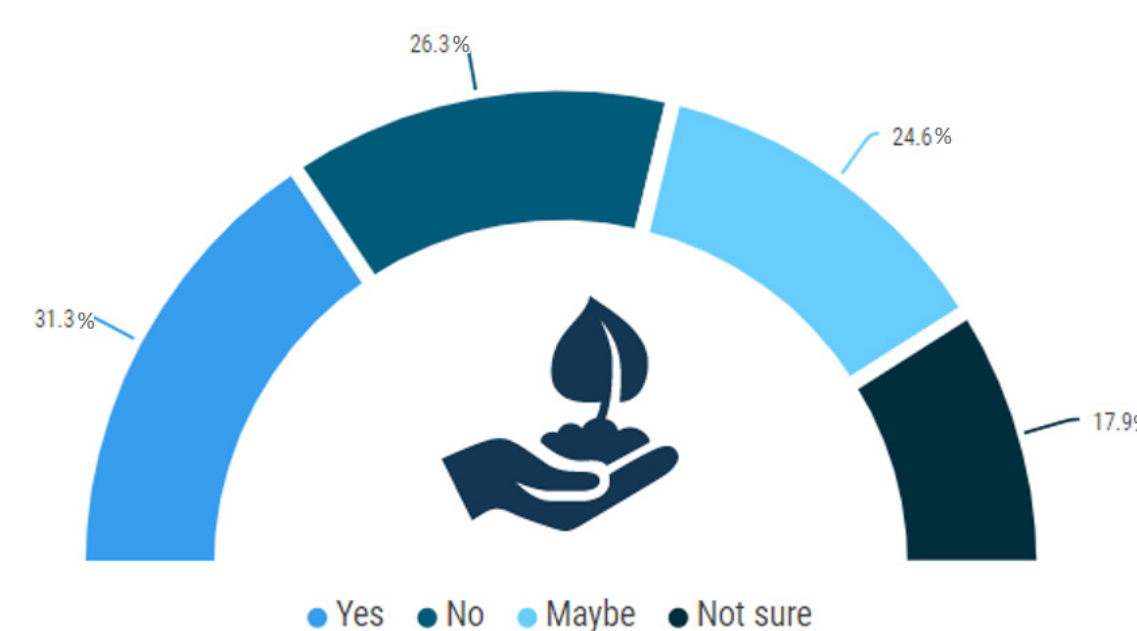
Developing healthy eating habits isn't as confusing or as restrictive as many people imagine. The essential steps are to eat mostly foods derived from plants—vegetables, fruits, whole grains and legumes (beans, peas, lentils)—and limit highly processed foods. Or even go to the extreme. We asked people if they had the chance to focus their diet on insects and here are the answers that did not surprise us at all.



**The diet of the future is likely to be practiced within the next 30 years. This provides that the consumption of red meat and sugar should be cut in half, while we will double the consumption of nuts, fruits, vegetables and legumes. Are you available to make this change in your health and that of the planet?**



**In 2050 the world population will be around 10 billion people. To feed so many people, food production will have to increase by around 70%, according to the United Nations Food Organization (FAO). Do you trust this trajectory of food production?**



## Conclusions

Analysing the responses obtained through the survey, it appears that the Portuguese population is worried with the impacts of climate change. Mainly, with tropical storms and coastal floods. A certain environmental concern is perceptible, even because there is already a habit of saving water and recycling. When we analyse the responses obtained regarding the diet, it is clear that the population is not in the habit of eating insects, nor is it available for this change. Only a small portion of the sample population is susceptible to altering their eating habits. Including, a decrease in the consumption of red meat and an increase in the consumption of nuts, fruits and vegetables. Also, it is concluded that the population sees with some apprehension the increase of the world population in the face of food security.

## Bibliography

<sup>1</sup>[https://unric.org/pt/wp-content/uploads/sites/9/2019/01/SDG\\_brochure\\_PT-web.pdf](https://unric.org/pt/wp-content/uploads/sites/9/2019/01/SDG_brochure_PT-web.pdf)  
<sup>2</sup><https://www.prb.org/2020-world-population-data-sheet/>