**Climate Change**

The study of climate is a complex and rapidly evolving field of research, due to the large number of factors involved. Earth's climate has never been static. As a consequence of alterations in the energy balance, it is subject to variations on all time scales, from decades to thousands and millions of years. Among the most notable climatic variations that have occurred throughout the history of the Earth, is the cycle of about 100,000 years, of glacial periods, followed by interglacial periods.

What is climate change?

Climate change is the global variation in the Earth's climate. It is due to natural causes and also to the action of man and they occur at very different time scales and on all climatic parameters: temperature, rainfall, cloud cover, etc. The term "greenhouse effect" refers to the retention of the Sun's heat in the Earth's atmosphere by a layer of gases in the atmosphere. Without them, life as we know it would not be possible, since the planet would be too cold. These gases include carbon dioxide, nitrous oxide, and methane, which are released by industry, agriculture, and the burning of fossil fuels. The industrialized world has achieved that the concentration of these gases has increased by 30% since the last century, when, without human action, nature was in charge of balancing emissions.

In the present

At present, there is an almost generalized scientific consensus around the idea that our mode of energy production and consumption is generating a global climate change, which in turn will cause serious impacts both on the earth and on socioeconomic systems. .

Climate change affects us all. The potential impact is huge, with predictions of a lack of clean water, large changes in conditions for food production, and an increase in death rates due to floods, storms, droughts, and heat waves. Ultimately, climate change is not just an environmental phenomenon but also has profound economic and social consequences. The poorest countries, which are least prepared to deal with rapid changes, will suffer the worst consequences.

Consequences

Extinction of animals and plants is predicted, as habitats will change so fast that many species will not be able to adapt in time. The World Health Organization has warned that the health of millions of people could be threatened by increased malaria, malnutrition and waterborne diseases. Spain, due to its geographical location and socioeconomic characteristics, is very vulnerable to climate change.

Consequently, although there are uncertainties that do not allow the predicted climate changes to be quantified with sufficient precision, the information validated so far is sufficient to take immediate action, in accordance with the so-called “precautionary principle” referred to in Article 3. of the Framework Convention on Climate Change. Inertia, delays and the irreversibility of the climate system are very important factors to take into account and, the longer it takes to take these measures, the less reversible the effects of increasing greenhouse gas concentrations will be.