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STUDY CONCERNING CLIMATE CHANGE FROM THE PRESENT TIME

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Abstract: One of the harsh realities of our times is represented by the intensification of the climate changes phenomenon. If fifty years ago the possibility of climate change was seen only as a hypothesis or as an event that was less probable to happen among the society, humanity is increasingly feeling its effects nowadays. A considerable number of domains and essential economic activities are impacted by fact (agriculture, forestry sector, the management of natural resources, energy, infrastructure, tourism, etc.). Unfortunately, the well-being of local communities also has to suffer as a result of the climate changes. This study's main objective is to create an analysis of the climate changes' effects in Romania from the present-time, which can be seen as the consequences of extreme weather phenomena and the identification of associated risks in the previously mentioned areas, but also of solutions and proposals to improve the existing situation. Secondly, the aim is to present the consequences of this climate phenomenon in two of the essential domains of the Romanian economy and society, which are agriculture and tourism. Moreover, this study intends to also explore the measures and the action plans that are currently existent, and those that are proposed to be adopted in the near future as well.

• Introduction

Over the last few centuries, the whole world has faced numerous environmental problems. Of all, climate change had and continues to have the greatest impact on the planet, becoming more noticeable from year to year. These phenomena refer to meteorological deviations that differ from the standard pattern and manifest themselves in extreme weather events. They occur in all parts of the world and, as a result, the planet is facing extreme events such as floods, heavy rains, droughts, tornadoes, heat waves or cold spells, seasonal instability, or even fires that destroy vegetation.

Our country is not immune to these climate changes either. Romania is also facing increasingly high temperatures and, in recent years, severe heat waves, resulting in scorching summers, lack of rainfall, and warmer winters with increasingly rare snowfall. **The effects of climate change have had a major impact on agriculture**, affecting many categories of cultivated species, both autumn or spring crops. Vegetation factors such as temperature and water show the greatest changes, leading to shortage of agricultural products.

Another key area deeply affected by climate change is tourism. With the onset of summer heat waves, floods, torrential rains, periods of drought, and even high levels of pollution, many tourist attractions are being affected by climate change, and tourists are forced to seek other destinations. It is clear that there is a change in destination choices in recent years, with affected regions being increasingly avoided.



• Material and method

The paper focuses on defining the concept of climate change in our times, reflecting in particular the major impact it has on two important economic areas: agriculture and tourism. It presents the results and consequences of climate change in Romania, and, it proposes a series of useful methods and techniques that help to combat the negative effects.

The main method applied in this study was a bibliographic analysis of the current specialized literature in the field of research (books and scientific papers included in international databases such as Web of Science, Scopus, Google Scholar), along with a comparative analysis between the current situation in Romania and Europe in the present, by consulting recognized databases (Eurostat, INSEE).

Conclusions:

Following this study, it is clear that climate change affects all aspects of human life. One of the main areas affected in Romania is agriculture. Appropriate prevention and adaptation measures are needed. These involve crop diversification, soil protection, resistant crops, digitization, development of sustainable agriculture, as well as raising public awareness of the risks and problems caused by pollution and climate change.

Tourism is another sector deeply affected by climate change at the national level. However, agritourism supports tourism by promoting it in rural areas, which have enormous potential for local development. It supports local communities and encourages visits to rural areas and to the natural landscapes found there, but in a eco-friendly and sustainable way.

• Results and discussions

Of all the economic sectors most affected by climate change in recent decades, agriculture has suffered the most severe consequences. Vegetation factors are among the most affected elements of cultivation.

Temperatures have gradually increased over the last few decades, including during the cooler seasons (autumn and winter), while in the warm season, the so-called heat waves have become increasingly frequent (periods of time lasting more than 2-3 days with temperatures above 32 degrees Celsius). **Water quantity and quality** are either not sufficient in recent years, affecting agricultural crops and slowing down plant growth and development, or can cause floods due to continuous rainfall. For agriculture, there has been a significant moisture deficit in the soil due to prolonged periods of drought and the lack of modern irrigation systems in our country. Another effect of climate change on agriculture is related to the **shortage of agricultural products**. These are becoming increasingly difficult to obtain and, as a result, their quantity is decreasing, which is causing producers and farmers to raise prices.

For agriculture to function properly, it is important to take **immediate and priority measures** to combat and adapt to climate change, that include the following:

1. **Using plant varieties that are adapted to change, with greater resilience, and practicing crop rotation.**
2. **New and modern methods of agricultural production.**
3. **Promoting the concept of sustainability in agriculture in all decisions taken at national level in this field, reflected in both legislation and public policies.**



Tourism is also highly impacted by climate change, especially cities, the coastal area, and many natural tourist attractions. For Romania, doing tourism in a sustainable way, sometimes means encouraging the branch of agritourism, that offers nature, agricultural products, and authentic food. In addition, agritourism influences the development of rural areas and the production of local products. To ensure sustainability in Romania's rural areas, a few studies must be made:

1. **The area is suitable for agritourism - well-equipped farms, accommodation facilities.**
2. **The region is open to support agrotourism - the community has desire and openness to welcome tourists.**

Currently, in our contry, this sector is experiencing a revival, with accommodation facilities becoming more modern and attractive, and restaurants offering increasingly sophisticated menus, promoting local products according to the international farm-to-table concept.

We believe that Romanian agritourism has high development potential and could even become a key sector for tourism in our country, in a sustainable manner, without negatively affecting rural areas in any way.