

GREENHOUSE EFFECT AND CLIMATE CHANGE IN EU LEGISLATION

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Abstract

We can easily see that the planet undergoes changes in what the climate is concerned. Due to the increase in greenhouse gas emissions, the average global temperature is also increasing. Increasing meteorological conditions have a negative impact on the economy, the environment, health and everyday life.

Climate change is a major challenge for the world population. We need to consider taking proper measures in order to combat climate change while also respecting the precautionary principle.

Keywords: *the environment, climate, greenhouse gases, pollution.*

History of related legislation

At a global level, humanity faces significant climate change.

A first action to combat the phenomenon took place in Rio de Janeiro in 1992, by signing the United Nations Framework Convention on Climate Change.

In our country, this Convention was ratified by Law no. 24/1994.

Under the Convention, the 194 signatory countries agreed to act swiftly and on a long-term basis against environmental pollution, this being done by stabilizing greenhouse gas concentrations so that people no longer dangerously impact the climate system.

In 1997, in Kyoto, Japan, developed countries took action to combat climate change by taking commitments to limit and reduce greenhouse gas emissions in the period 2008-2012.

It takes the effort of all countries, including the effort of developing countries, in order to significantly reduce greenhouse gas emissions.

It is hoped that global emissions of greenhouse gasses will fall by at least 50% by 2050 in comparison to the 1990 greenhouse gas emission levels.

The European Union unilaterally adopted in 2007 the commitment to reduce greenhouse gas emissions with 20% by 2020 compared to 1990.

Also in 2007, the European Commission initiated the establishment of a policies to promote measures to mitigate the negative effects of climate change in different sectors of activity.

In 2009, the European Union promoted the legislative package "Climate Change - Energy" [1], in order to achieve the established goal.

The average global temperature continues to rise, despite constant efforts to reduce emissions of greenhouse gases, generating further negative impact on anthropic and natural systems.

The European Commission published in 2009 the 'White Paper - Adapting to climate change', which sought to ensure a minimal negative impact on economic and social system sat European level.

The National Climate Change Strategy 2013-2020 addresses both the process of reducing greenhouse gas emissions to meet national targets as well as adapting to the effects of climate change, taking into account EU policy, in the field of climate change.

An amendment to the Kyoto Protocol, which sets out the regulatory norms for the second commitment period, 2013-2020, was adopted in 2012.

The provisions of this amendment have begun to be applied from 2013 onwards.

In December 2015, at the United Nations Climate Change Conference in Paris, participating countries around the world agreed to limit global warming.

A key mechanism for combating climate change is the EU emissions trading system.[2]

Article 191 of the Treaty on the Functioning of the European Union (TFEU) establishes an objective of the European Union's policy on the environment and the fight against climate change.

The Kyoto Protocol includes the following legislative acts:

- Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community.

- Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.
- Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006.
- Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.

A proposal for a Regulation of the European Parliament and of the Council on the mandatory annual reduction of greenhouse gas emissions by Member States was drafted in Strasbourg on 12-15 June 2017 between 2021-2030, with a view to achieving a resilient energy union and respecting the commitments made under the Paris Agreement, and amending EU Regulation no.525/2013 of the European Parliament and of the Council on a mechanism for monitoring and reporting greenhouse gas emissions.

The report presented on behalf of the Committee on the Environment, Public Health and Food Safety includes 49 amendments to the proposal for a Regulation of the European Parliament and of the Council on the reduction of greenhouse gas emissions during the period 2021-2030.

In the debate on this proposal, on 13 June 2017, MEPs welcomed the step taken to reduce greenhouse gas emissions.

They have highlighted the ambitious long-term perspective, although 2018 was the starting date for reducing the gas emissions included in the report.

Some Member States may face difficulties but receive EU support in order to achieve their objectives at a realistic pace and which will support the agricultural sector.

L. Fabius provides an excellent analysis of role that climate change has in law: „There are many concrete vectors to combat climate disruption, especially new green technologies. But right is here, essential, because it defines the normative framework in which all actions of society must lie. Right has the power to direct the action of administration, businesses, citizens in a direction more or less favorable to the

preservation of our planet. For this, the climate issue is a transversal legal stake that equally concerns health law, labor law, intellectual property law, the right of property.” [3]

Greenhouse effect and climate change – the challenge of the 21st century

The greenhouse effect is a natural phenomenon where part of terrestrial infrared radiation is retained by the terrestrial atmosphere. The greenhouse effect is caused by the amount of carbon dioxide and other substances accumulated above the soil. These substances lightly pass the ultraviolet rays, turning into thermal energy, and this heat passes much harder back, forming the greenhouse effect.

The greenhouse effect is beneficial for plant and life development, but in too large a rise in temperature. The oceans [4] of the world absorb large amounts of carbon dioxide, which increases their acidity, which threatens the survival of many marine species. [5]

The term "climate" generally defines the average weather profile in a given area, determined over a period of several years.

Changes in the ecosystem, Earth's energy balance (radiation) have played an important role in climate change.

Climate warming is a phenomenon accepted by the international scientific community.

„The pivot of current climate change is a more and more rapid process of warming the atmosphere.” [6]

The main factors that lead to climate warming are both natural (variations in solar radiation and volcanic activity) and anthropogenic (changes in atmospheric composition due to human activities).

Europe's climate warmed almost a degree Celsius in the last century, faster than the global average.

According to the 2007 IPCC report [7], other consequences of climate warming have also been listed: declining productivity of all grains at low latitudes, increased mortality due to heat waves, floods, droughts.

Natural causes of climate change

Insolation – exposure of an area to solar radiation.

The Milankovic parameters – correspond to the three astronomical phenomena that affect certain planets of the solar system.

The Eccentricity of the terrestrial orbit – is due to the gravitational pull between the Earth and other planets of the solar system.

Anthropic causes of climate change

- Burning fossil fuels
- Cutting tropical forests
- Animal farming, waste disposal, etc.

These activities generate enormous amounts of greenhouse gases.

The effects of climate change

Among the most visible at the global level and which significantly influences economic and social life:

- melting glaciers and rising sea levels,
- extreme meteorological phenomena, change of precipitation regime.

Other effects of climate change:

- risks to flora and fauna,
- risks to human health,
- costs for society and the economy.

Combating climate change at international level

Greenhouse gas emissions continue to increase with each year. All states, both developed and developing ones, are making efforts to combat climate change.

In the effort of States to combat climate change, a number of Conventions or Agreements have been adopted, namely:

- The United Nations Framework Convention on Climate Change (UNFCCC) in Rio de Janeiro,
- 1997, the Convention is complemented by the Kyoto Protocol, which entered into force in 2005,
- The 2007 Bali Action Plan,

- 2010, Cancun, Mexico has decided to create institutions dedicated to key points, such as the Green Climate Fund.
- 2011, the Durban Platform for Consolidated Action was set up to develop a protocol, another legal instrument applicable to States Parties to the Framework Convention,
- The Doha Conference, 2012 – established a second commitment period of the Kyoto Protocol (2013-2020).
- Climate Change Conference in Warsaw, Poland, 2013 and Lima, Peru, 2014 – the starting point for progress towards COP 21 at Paris 2015,
- Paris Climate Conference (COP 21), December 2015 – 195 countries have adopted the first international agreement on the issue of climate change. This agreement enters into force in 2020.

European Climate Change Programs

The European Union's efforts to combat climate change and to encourage carbon reduction, date back to 1990.

Since then, the EU has put in place a number of policy measures to reduce greenhouse gas emissions, notably through the European Climate Change Program (ECPP), 2002.

The European Union is the first region in the world that has adopted binding legislation to ensure that the objectives are achieved.

In October 2014, the representatives of the European states reaffirmed their commitment to increasing the safety and sustainability of the EU economy and energy system by adopting the climate and energy policy framework for 2030.

EU targets for 2030

The framework for action setting these targets for 2030 was adopted by EU representatives in October 2014. It is based on the 2020 climate and energy package. The framework contains a mandatory emission reduction target across the EU at least 40% below 1990 levels by 2030.

The framework has necessarily set an EU-wide target to increase the share of renewable energies to at least 27% of EU energy consumption by 2030.

Objectives for 2050

In 2011, the EU Commission published a 'roadmap' that sets out the most cost-effective way of reaching a competitive economy by 2050. The following were set out:

- By 2050, the EU should reduce emissions to 80% compared to 1990 emissions;
- All sectors must contribute to the achievement of the objectives;
- The transition to low carbon emissions must be feasible and affordable.

Climate change at national level and combating climate change

Studies [8] carried out by the National Meteorological Administration revealed significant changes in the climate.

The issue of climate change at national level was addressed in the National Strategy on Climate Change, elaborated by the Ministry of Environment and Climate Change and adopted by GD no. 529/2013.

Implementation of this strategy is the responsibility of the Government for the period 2013-2020.

This Strategy identified the main areas where measures to reduce greenhouse gas emissions and to increase the natural carbon dioxide absorption capacity of the atmosphere should be implemented.

Climate action in Romania is supported by the European Union budget. At least 20% of the EU budget for 2014-2020 will be used for climate-related projects.

For 2014-2020, the most important programs that include measures to reduce greenhouse gas emissions and adapt to climate change are:

- Large Infrastructure Operational Programme [9] 2014-2020. Sectors - transport, environmental protection, risk management and adaptation to climate change, energy and energy efficiency.
- National Rural Development Program (PNDR) 2014-2020. Sectors: - economic and social development of rural areas in Romania.

- Regional Operational Program (POR) 2014-2020 – successor to the 2007-2020 Regional Operational Program.
- Sectoral Operational Program Increase of Economic Competitiveness – POSCCE 2007-2013.
- The Green House Program – the aim of this program is to improve the quality of air, water and soil, reduce pollution caused by wood and fossil fuel burning used to produce heat used for heating and domestic hot water.
- Law no. 121/2014 on energy efficiency, adopted on 1 August 2014, includes legal measures and obligations to improve energy efficiency. The law addresses both central and local public authorities and economic operators.

Coclusions

Anthropic activities directly and genuinely influence global warming.

If global action is not taken to reduce greenhouse gas emissions, climate change and the effects of global warming will worsen.

Integration of mitigation and adaptation measures to climate change in Romania's national strategies, policies and programs represents an important step in a green, ecologic and economic development with low emissions at a national level.[10]

Climate change effects can no longer be denied, they occur globally, regionally and locally, and must be addressed both by reducing the use of fossil and by reducing greenhouse gas emissions.

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