

THE EUROPEAN GREEN DEAL AND THE SUSTAINABLE DEVELOPMENT OF THE LUBUSKIE VOIVODESHIP

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Purpose: The publication presents the challenges facing the European Union but also Polish regions in implementing the Green Deal.

Design/methodology/approach: The method of statistical data analysis and source materials was used in the work.

Findings: The paper presents the most important issues of change posed by the European Union for the implementation of climate policy.

Originality/value: The paper is aimed at those interested in EU policy and climate policy in particular.

Keywords: regional development, region, green deal, climate policy, sustainable development, climate.

1. Introduction

The European Green Deal entered into force in the first half of 2021 in the implementation phase. This was preceded by a number of milestones setting the course of action. The European Commission, with the support of Member States and many stakeholders representing various business circles, non-governmental organizations and even many ordinary citizens, has set a new course of action.

Despite the ongoing COVID pandemic, the European Union's climate policy is being gradually developed by the European Commission (EC), which presents new projects and documents in this area. Just before the start of the pandemic in December 2019, the President of the European Commission, Ursula von der Leyen, presented a new EU development strategy, i.e. the European Green Deal (EGD). The Commission has published a Communication on the European Green Deal, which details the vision of the EU reaching climate neutrality in 2050 through the adoption of legislative solutions and measures to implement them, including unprecedented financial outlays. It is worth emphasizing that the Green Deal is not limited only

to climate policy, but also includes, among the others, a biodiversity strategy or the establishment of a circular economy (<https://raport.togetair.eu/...>, 2022).

It is an initiative aimed at achieving climate neutrality by the European economy by 2050. Unlike the energy and climate packages, the EGD was to be characterized by a holistic approach, covering both the energy sectors and other areas of the economy. Thus, the EGD is not only a new climate policy strategy, but de facto comprehensive transformation of the EU economy towards zero-emissions (Wojtyło, Musiałek, 2022).

The aim of the study is to present the changes that are faced by the European Union, but also by Polish regions in the implementation of the Green Deal. These are very big economic and climate challenges that are to shape the future of Europe.

2. Green Deal in the EU

Climate change and environmental degradation are a serious problem not only for Europe but also for the rest of the world (www2.deloitte.com/..., 2022). In order to be able to meet all the challenges related to this, it was decided to develop an action plan, which is commonly referred to as the European Green Deal. This plan is intended to support the transformation of the European Union into an innovative, resource-saving and additionally competitive economy, i.e. one that:

- by 2050 will be able to achieve zero level in terms of net greenhouse gas emissions,
- will develop an approach that decouples economic growth from resource consumption,
- cares for every citizen and every region, which guarantees sustainable development, which includes, above all, supporting changes taking place in regions that are most dependent on fossil fuels (commission.europa.eu/..., 2022).

At the same time, it should be pointed out that the plan in question is also intended to help in the fight against the coronavirus pandemic. It is added that the European Green Deal will be financed from funds that constitute 1/3 of the amount of EUR 1.8 trillion, allocated for investment tasks in relation to the recovery plan for the European Union, and additionally from funds from the 7-year EU budget.

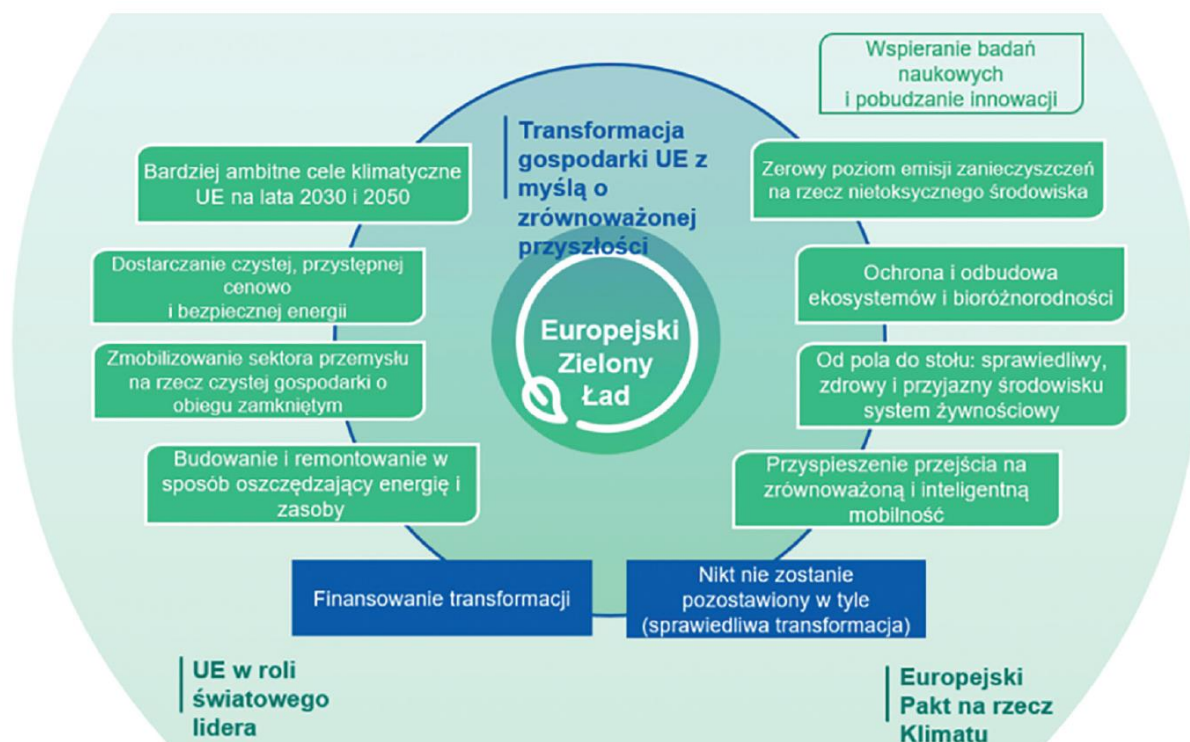


Figure 1. European Green Deal.

Source: Europejski Zielony Alert. Zrozumieć zieloną politykę UE, aby skutecznie uczestniczyć w konkursach Horyzontu Europa. NCBR, Warszawa 2022, p. 10.

The European Commission has decided to adopt a package of legislative proposals aimed at adjusting the climate policy, as well as energy, tax and transport policy within the European Union for the purpose of achieving the goal of reducing net greenhouse gas emissions, which is to take place by 2030, at the level of at least 55%, compared to 1990 emissions. As for the most important assumptions of the discussed plan, the following can be mentioned in particular:

- providing both clean and safe energy, including the introduction of a border carbon tax,
- more ambitious climate goals, including achieving climate neutrality,
- implementing a circular economy,
- construction of buildings with much lower energy demand,
- accelerating the transition to sustainable mobility, including minimizing emissions from passenger cars by 55% in 2030, and additionally emissions from vans by 50% respectively, and finally introducing zero emissions for new passenger cars, which is to be achieved by 2035,
- ensuring the care and restoration of ecosystems, including tackling soil and water pollution and taking action to implement a new forestry strategy,
- supporting scientific research,
- restoration of biodiversity,
- faster adaptation to climate change,
- health protection.

Considering the issue of what the idea in question means for Poland, it can be said that the European Union today plays the most important role when it comes to undertaking international activities for the protection of the natural environment and biodiversity. This organization also strives to become an example for other countries in the world. Achieving climate neutrality is declared by countries such as Japan and Korea, among the others. For Poland, this is mainly an opportunity for systematic transition to a low-emission economy and thus to move away from an economy that consumes too much non-renewable natural resources. It is becoming obvious that the transformation from the energy point of view is a significant challenge for Poland, but at the same time, it is the direction in which the entire European Union is currently following ([www.pois.gov.pl/...](http://www.pois.gov.pl/), 2022). In Poland, minimizing the emissivity of the economy will focus on such areas as:

- energy system,
- construction industry,
- industrial activity,
- transport,
- functioning of households.

It should also be emphasized that many instruments and approaches are to be used to implement all the assumptions resulting from the plan. Among the most important ones, the following can be distinguished:

- administrative tools - their essence boils down to limiting the use of hazardous substances, introducing most of the labelling requirements and additionally reducing emissions,
- governance measures - this is mainly about introducing new obligations for boards, due diligence requirements and extending the responsibility of producers,
- economic interventions - this is a category of tools including, among other things, subsidies, the imposition of taxes on emissions, a system of carbon dioxide emission levels and trading in their shares, the introduction of carbon tariffs, refunds, emission offsets and finally tradable recycling credits,
- financial and market incentives - this is about the introduction of green public procurement, awarding price bonuses for undertaking green investment tasks, concluding contracts for differences on carbon dioxide emissions ([www.ey.com/...](http://www.ey.com/), 2022).

It can be indicated that the European Green Deal will not be indifferent to individual sectors of the economy, because it will become a driving force for the possibility of introducing new business models, and additionally it will dictate new obligations to comply with applicable laws. The consequences of implementing all the assumptions of the plan will have an international character. The deal will encourage companies to minimize their carbon footprint, introduce business models in their structures that would take into account the

framework of the circular economy, and also to undertake investments in renewable energy sources and clean technologies. Business entities will be obliged to take into account both environmental and social consequences from the point of view of individual links in the supply chain in their business activities.

The effectiveness of the EU climate policy requires not only actions aimed at Member States, but also external activity, aimed at key non-EU emitters. The European Commission's Communication "Ready for 55": *achieving the EU's 2030 climate target on the way to climate neutrality* emphasizes that the European Green Deal and its initiatives are to confirm the EU's global leadership in the fight against global warming. At the same time, it was noted that the EU alone is not able to take sufficient steps to stop the changes and needs the support of the rest of the world.

According to the European Environment Agency, the European Union is responsible for 8% of global greenhouse gas emissions (15% in 1990). Thanks to years of efforts, these emissions for the EU as a whole fell by 24% between 1990 and 2019 (according to Eurostat data). However, at the same time, there was an increase in global emissions – in 2016 they were 40% higher than in 1990.

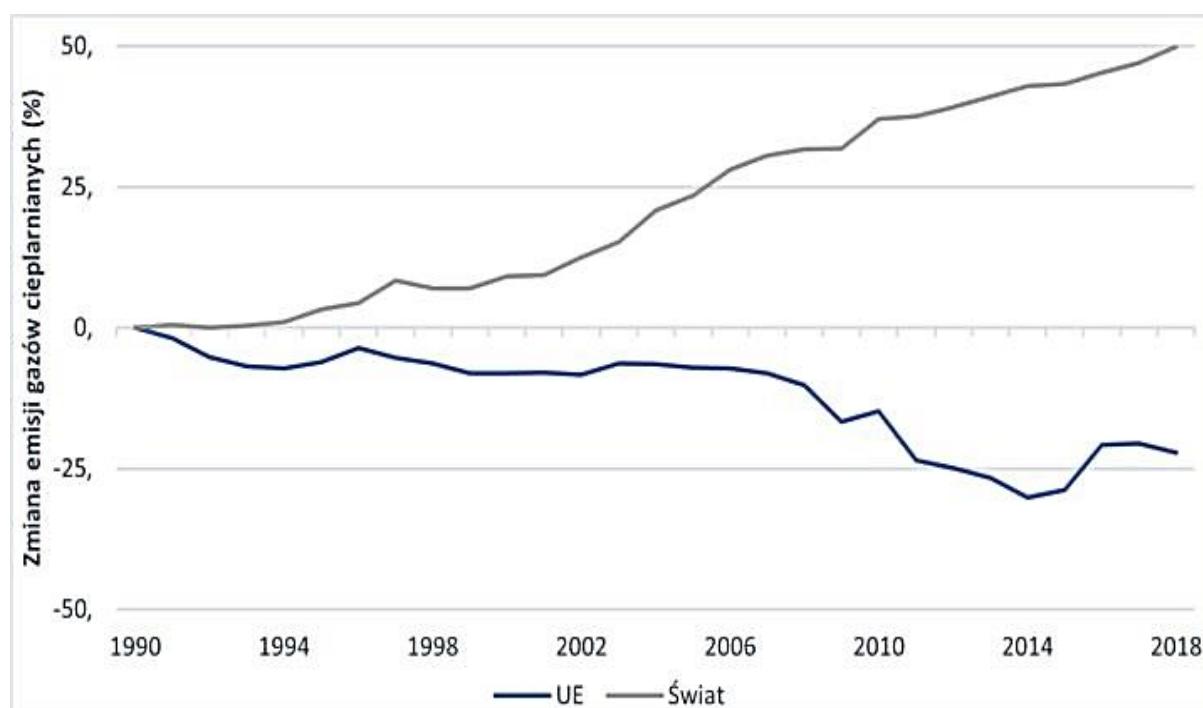


Figure 2. Change in total GHG emissions for EU-27 and globally, including land use, land use change and forestry (LULUCF) emissions, 1990-2018 vs. 1990 (%).

Source: Europejski Zielony Ład. Stan realizacji, wyzwania, nadzieje., Report 06/2022, Kraków 2022, p. 36.

The above statistics clearly demonstrate the very limited effectiveness of Brussels' climate diplomacy so far. To understand the reasons, it is necessary to look at the factors that influenced this, in particular the EU's relationship with other major emitters and the outcome of the

negotiations at last year's 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26).

The Polish government – as the only one of the 27 countries – remains sceptical about the EU's ambitious climate goals. In particular, it does not accept the goal of climate neutrality in 2050. The laggard attitude stems primarily from concerns about political consequences at the national level: loss of support in sectors that are declining or in need of fundamental transformation. Meanwhile, the voice of business is much more nuanced. Transformation is seen as the only sustainable solution, and companies see it as both a challenge and an opportunity to improve competitiveness and introduce innovative solutions. However, it requires a clear action plan that takes into account the needs of various stakeholders and significant financial support. The ability of Polish companies to compete globally and on the single market, as well as the ability to create and develop market niches will depend on the effectiveness of the transformation process. The stakes are high here (Europejski Zielony Ład..., 2021, p. 7.).

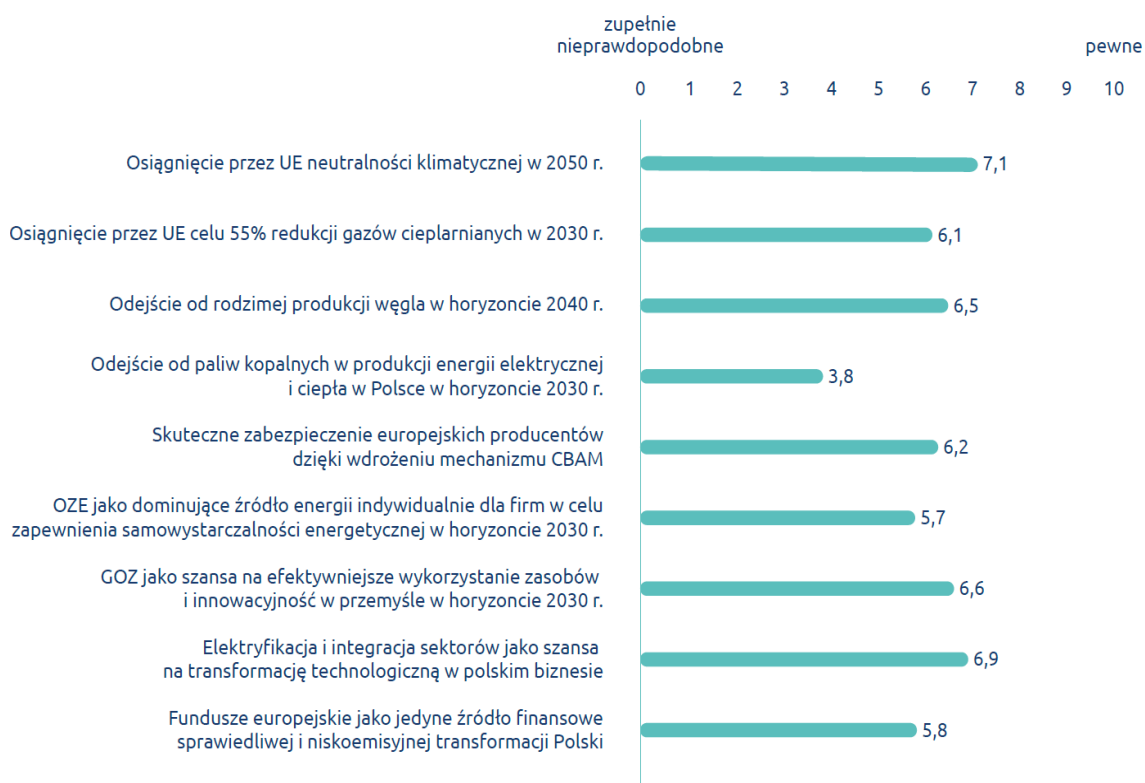


Figure 3. Assessment of the probability of achieving selected climate goals.

Source: Europejski Zielony Ład - ocena wiedzy i postaw przedstawicieli polskiego biznesu. Raport z badań ankietowych, p. 17.

Business representatives are not clear about the sources from which the fair and low-emission transformation will be financed. A significant part of them believe that in order to support entities in their efforts to become climate neutral, it will be necessary to involve national funds (public and private) outside EU funds. This has a special context in the era of events that took place on the eve of the European Council Summit in December 2020. The lack of European

funds, e.g. from the Just Transition Fund, the Recovery and Resilience Facility and the new EU perspective 2021-2027 would force Polish companies to make significant and risky investments from private funds. Failure to carry them out would reduce the competitiveness of entities on the single market, and resignation from European funds will limit other pro-development activities (Europejski Zielony Ład..., 2021, p. 18).

3. Green Deal - Lubuskie voivodeship

As far as the Lubuskie voivodeship is concerned, there is a need to update the current development strategy, primarily the changes noticed by the local authorities, which are taking place in the socio-economic situation of both the region and the entire country and the world. Among all the defined problems, such as the aging of the population or dynamic technical and technological progress, the need to take action to protect the environment and respond to climate change were also mentioned (Strategia rozwoju ..., 2021).

It is indicated that the Lubuskie voivodeship has quite good conditions for the production of energy from renewable sources, which applies in particular to the use of wind energy, and additionally installations based on biomass combustion or biogas production technology. Thus, it is emphasized that the region is located in a favourable area from the point of view of the operation of wind farms. The use of solar energy, both in terms of micro-installations and photovoltaic farms, is presented as an opportunity to strengthen renewable energy sources. Additionally, the voivodeship is located in the area of a valuable heat flux, therefore it is worth undertaking analyses concerning the possibility of using regional thermal waters in economic or tourist projects.

It is added that the discussed region has quite large resources of lignite, even an opencast mine was planned, but it has been observed that in the world there are trends focused primarily on green energy sources that are friendly not only from the point of view of the environment, but also for human health. Such tendencies are also intensified by the current activity in the European Union.

Taking into account air pollution, in the Lubuskie voivodeship the basic source of emissions is low emission, i.e. the one that comes from the household and municipal sector and includes individual sources of heat generation and smaller municipal heating plants. It is also possible to point to a visible increase in terms of transport emissions, in particular near the main roads and towns, in the vicinity of which there are larger transport junctions and thus a higher density of roads. It is therefore necessary to support initiatives focused on combating low emission sources and reducing carbon dioxide in the atmosphere. The region recognizes that environmental pollution and the crisis in natural resources are international difficulties.

In addition, the growing demand for raw materials and limited access to them result in increases in their prices, forcing rational political actions related to the use of raw materials.

Another issue is that the percentage of selective waste has increased in the region, but the mass per capita has definitely increased, thus in this respect the voivodship was ranked 3rd in the whole country. It is therefore necessary to popularize the circular economy and undertake promotional activities to introduce smart technological solutions that would be fully environmentally friendly. To sum up, in the Lubuskie voivodship in terms of green economy and sustainable development of natural resources, the following challenges can be identified, namely:

- consistent implementation of the circular economy,
- transition to a low-carbon economy,
- minimizing greenhouse gas emissions, which in particular concerns carbon dioxide, and which is to be one of the elements of pro-ecological restructuring of the local economy,
- increasing the efficiency of energy use,
- effective use of the existing potential in the field of renewable energy sources,
- sustainable use of natural resources,
- supporting development for sustainable consumption,
- undertaking promotional activities for innovative technological solutions that are friendly from the point of view of nature,
- increasing efficiency in the management of water and waste from industrial activities,
- development of package tourism, using both the potential and the location of the voivodeship in question.

In the voivodship, it is noticed that climate change and related negative weather phenomena, including heavy downpours and storms, which are dangerous to human life and health, as well as causing infrastructure damage, are becoming an important problem nowadays. Thus, the development of green and blue infrastructure, especially in urbanized areas, is becoming increasingly important. It is added that the improvement of the environment necessitates undertaking comprehensive educational activities and supporting biodiversity. In the course of work on the new strategy, the following challenges were identified, in particular:

- the need to modernize the water and sewage infrastructure, which applies in particular to rural areas,
- taking action to counteract the negative consequences of climate change and negative weather phenomena,
- development of pro-ecological infrastructure of urbanized areas,
- introduction of preventive measures in relation to drought and floods,
- ensuring effective protection of biodiversity,

- introducing measures to protect animals,
- undertaking educational initiatives and the possibility of shaping pro-environmental attitudes among the local community,
- proper management of rainwater (Strategia ..., 2021).

As for the most important plans for the Lubuskie voivodeship, it is assumed that in 2030 it will be a green land of intelligent technologies, which will be characterized by high quality of functioning of local residents, which means above all:

- a region of innovative, green economy, to be achieved through the cooperation of business entities with the scientific community,
- a region coherent from a spatial point of view,
- a region located in the basin of the Odra and Warta Rivers, near lakes and forests, which responsibly uses all natural resources, thus guaranteeing ideal conditions for tourism and recreation and the possibility of producing healthy and fully safe food.

In order to meet all the challenges related to the crisis of natural resources and pollution of the natural environment, the Lubuskie voivodeship believes that it is necessary to introduce changes in the current way of managing the possessed resources. At the same time, the voivodeship in question sets itself one of the leading goals to guarantee the well-being of the inhabitants while maintaining the proper condition of nature, which is manifested in the transition to a green economy. The voivodeship is aware that appropriate natural conditions, and additionally, the introduction of a low-emission economy and taking actions to introduce fully ecological solutions translate into the development of agriculture, in particular the ecological one, and may foster the competitiveness of agricultural production.

All undertakings that are to serve the development of both technical and transport infrastructure are to be carried out with the simultaneous consideration of the natural environment. This includes, but is not limited to, aspects such as:

- undertaking investments related to the modernization of energy and ICT systems,
- introducing activities to improve road transport, including modernization and construction of roads and bridges,
- improving railway communication, which includes, for example, increasing the number of connections, modernizing rolling stock stations,
- introduction of improvements in the field of water communication,
- increasing ICT accessibility.

It is indicated that improving both the standard and accessibility, and additionally minimizing the harmfulness of public transport from the point of view of the environment, or introducing investment tasks related to the expansion of bicycle routes are aimed at increasing the number of residents who will use such solutions, because it will translate into the possibility of achieving a measurable effect in the form of improving the general condition of the natural environment in the region. The demonstrated effect is to be additionally strengthened

by planning the creation of pro-ecological attitudes of local citizens, ensuring the protection of biodiversity, carrying out protective measures for waters and the earth's surface, and ensuring protection against excessive noise. Ensuring flood safety and minimizing the risks associated with the appearance of violent weather phenomena will also contribute to the possibility of guaranteeing a greater level of safety for residents.

In addition, it can be pointed out that in the field of environmental protection, including counteracting the negative consequences of climate change, the Lubuskie voivodeship has the following operational objectives, namely:

- maintaining the appropriate condition of surface and underground waters,
- ensuring access to clean water,
- modernization of sewage treatment plants,
- building sewage systems in areas that are outside the agglomeration,
- modernization of water supply networks and water treatment plants,
- supporting all activities undertaken for the management of municipal sewage sludge,
- implementation of system management in the field of municipal utilities in a supra-local system, which would be based on local municipal installations,
- implementation of further improvements in the functioning of the system of selective collection of municipal waste,
- introducing innovative technologies in relation to both recovery and disposal of waste,
- removal of any threats resulting from improper storage of waste, including liquidation of illegal landfills,
- rational use of soil resources,
- modernization of flood embankments,
- protection of areas particularly exposed to flooding,
- introduction of electronic systems and programs in the field of flood protection monitoring,
- dredging the bottom of rivers,
- construction of retention reservoirs,
- appropriate rainwater management,
- supporting initiatives related to drainage,
- promoting water storage,
- minimizing road noise emissions,
- implementation of measures to improve the acoustic climate, in particular close to industrial plants,
- minimizing the consequences of extreme weather events,
- shaping pro-ecological attitudes and supporting all actions taken to protect animals,
- development of the local landscape protection system (Strategia ..., 2021).

The fundamental source of air pollutant emissions in the Lubuskie voivodeship is primarily the emission resulting from human activities. The emissions of a natural nature, i.e. those originating from various natural processes, such as soil erosion, weathering of rocks, and additionally volcanic eruptions and others, are of rather marginal importance and thus affect the quality of atmospheric air in the region in question to a rather minimal degree. Among the sources of air pollution of anthropogenic origin in the voivodship, the following should be mentioned:

- point sources, including but not limited to emissions from various industrial and power plants,
- surface sources, i.e. emissions from the municipal economy, in other words low emissions, coming from such places as, for example, regional boiler houses or individual home hearths,
- line sources, i.e. communication emission (Plan zagospodarowania ..., 2018).

At the same time, it should be noticed that the spatial distribution of pollutant emissions into the air in the Lubuskie voivodship is uneven. The largest amounts of pollutants are emitted in the areas of districts, especially those densely populated and industrialized, such as districts, including, above all, Żary, Międzyrzecz, and Zielona Góra, due to particulate pollution, and additionally districts, including Żary and Gorzów, and the city of Gorzów Wielkopolski and the city of Zielona Góra due to gas pollution.

Noise is also one of the quite serious environmental pollutants in the voivodeship. It is characterized by the prevalence of occurrence and the variety of sources. It is added that noise inseparably accompanies human activity and has a harmful impact on humans, especially with long-term impact. The fundamental anthropogenic sources of noise are, for example, the following aspects, namely:

- car, rail, tram and air transport,
- car parks, bus and tram depots,
- various industrial, craft or service establishments,
- public facilities, such as stadiums and clubs,
- construction sites.

Anthropogenic activity that is carried out in the catchment area is also reflected in the quality of surface waters. Fundamental threats to the quality of water in the Lubuskie voivodeship are related to the demand for water and thus excessive water intake for living and economic purposes, the discharge of pollutants resulting from human activity and the inflow of pollutants from various spatial sources, which include uncontrolled surface runoff of pollutants fertilisers, and additionally chemicals from agricultural land.

To sum up, it can be pointed out that the European Green Deal is a development strategy, based on the assumption of transforming the European Union into a climate-neutral area. Consequently, it is a response to the current climate crisis and to the strong procedures of the natural environment. However, it should be remembered that the implementation of all assumptions of this deal requires financial outlays (Pietruszewska, Kozłowski, 2022).

In addition, due to the scale of the assumed reforms, the European Green Deal is widely regarded as one of the largest initiatives in the history of the European Union.

The European Green Deal is intended both to stop negative climate change, but also to support the protection of biodiversity and lead to its restoration. However, from an economic and social perspective, this plan should help the transition to an innovative, energy-efficient and competitive global economy. This will entail various modifications in many areas, including social and industrial policy, and additionally in the labour market and investment financing. The implementation of changes related to the deal brings with it a number of various challenges, even those of a geopolitical nature, for example in the area of raw materials and energy policy of individual countries (Kucharczyk, 2021).

4. Conclusion

The key challenge for the implementation of the Green Deal are investments that require huge capital resources, as well as the costs of rising prices of energy and other goods and services. This process may slow down the increase in the standard of living, as well as the process of economic convergence between Central and Eastern Europe and Western Europe. The key concern in Poland is the threat of consolidating its semi-peripheral economic and political status. Over the last years of economic transformation and almost 20 years in the EU, we have not caught up with the modernization lag behind the West, and there is already a risk that it will recede (Wojtyła, Musiałek, 2022, p. 221). The fact that the EGD is not only a political strategy, but a fundamental change in thinking about economic activity and an opportunity for technological and social changes while maintaining competitiveness, is signalled by the member companies of the Lewiatan Confederation. According to the research report conducted by the Lewiatan Confederation, less than 30% of the surveyed entities believe that the EGD will not force any changes on their businesses in the next 5 years. This view was definitely more often formulated by smaller entities. Among the others, the prevailing concept is that changes are inevitable and will concern both the production technology (for every third company – 33%) and the product portfolio (27%). Reorienting the entire business (14%) or changing the target group (10%) are significantly less frequent (Europejski Zielony Ład – ocean..., 2021).

The Lubuskie voivodeship is a region known for its natural and landscape values, but sustainable economic development must be accompanied by environmental protection and prevention of its degradation. Such an approach requires new innovations and modern technologies. The saying: green land of modern technologies, in the context of the Lubuskie voivodeship, is a challenge for the entire region for the new decades. Smart green economy has currently been a trend already in force in Europe.

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