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Contemporary Challenges in the Implementation of the Idea of Sustainable Development

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Abstract. The issue of sustainable development has been an important problem discussed among academics, practitioners and public authorities for more than thirty years. In theory, this topic has received extensive analysis presented in numerous publications. On the other hand, the introduction of the principles of sustainable development into socio-economic practice is met with many obstacles. The purpose of the article is, on the one hand, to point out the need for a close connection between environmental issues and the economic and social problems that are affecting modern civilization. On the other hand, it is to draw attention to the limitations of the implementation of the idea of sustainable development arising from the effects of global disasters and conflicts, such as global warming, the COVID-19 coronavirus pandemic and the war in Ukraine. The methodological basis of the article was the use of the method of analysis of secondary materials, i.e., the literature on the subject, reports of empirical studies conducted, and official documents. The added value of the study is the identification of economic, geopolitical and socio-economic conditions regarding the difficulties of applying the idea of sustainable development. However, a situation that favors its implementation is the need for active cooperation between the world of science, business, public authorities and social organizations.

Keywords: sustainable development, implementation, difficulties.

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1. INTRODUCTION

The issue of applying the idea of sustainable development in the economic and political practice of modern societies has been and still is the focus of numerous world conferences, congresses and publications. Using marketing nomenclature, the principles of sustainable development are promoted very widely. However, problems arise in their practical implementation. Difficulties in implementing the idea of sustainable development are combined with the current effects of global disasters and conflicts, such as global warming, the COVID-19 pandemic, and the war in Ukraine. The purpose of the article is to present the existing threats hindering the need to implement this idea in nature, economy and society. The article consists of four parts (in addition to the introduction and bibliography). The first part discusses the theoretical problems of sustainable development. The beginnings of the formal shaping of this idea in the second half of the 20th century are indicated. Synthetic and analytical definitions are discussed, taking into account the natural, economic and social aspects that form the ontological value capital of sustainable development. They inspire interdisciplinary analysis and implementation. The second part includes a discussion of views on the risks of implementing the value of sustainable development in practice. These difficulties, as highlighted, arise from contemporary global conflicts and disasters. In part three of the article, using the case study of the war in Ukraine as an example, the situations of disregard for the principles of this idea are pointed out. The article concludes with the fourth part, which presents the need for an open discussion of the economic, geopolitical and socio-economic conditions for the implementation of sustainable development values. These values in their theoretical and practical aspects, according to the Kantian approach, can be called the idea of practical reason, which is very much needed today. The article uses the method of analyzing secondary materials in the form of a critical analysis of the literature on the subject, analysis of publications in journals, the Internet, and published reports on empirical research. It should be emphasized that in modern science, more and more researchers use secondary data collected by other researchers. These data are included in empirical reports, magazines, statistical yearbooks. The analysis of secondary empirical data is an established research method in the social sciences (Frankfort-Nachmias and Nachmias, 1996). This approach results primarily from economic and methodological reasons. Because the collection of primary data is expensive and not always in line with the methodological requirements, especially when it concerns one researcher or a small research team, limited financial resources. The adopted research methodology used in the article includes, among others, the above methodological premises. Based on the analysis of the research material, it was concluded that the idea of sustainable development on the economic, social and natural levels is a theoretical idea and the wish of scientists and politicians. In economic and social practice, it is fiction. Global climate changes, natural disasters, social and armed conflicts (the war in Ukraine) caused by human activity constitute the basic difficulty in implementing the idea of sustainable development.

2. LITERATURE ASPECTS OF SUSTAINABLE DEVELOPMENT

Interest in environmental issues and the future of the world was manifested in the views of many scientists, as well as economic practitioners. Without going into the characteristics of the historical features of this problem, it should be noted that since the second half of the 20th century, a very intense evolution of views began regarding the active involvement of many countries and international organizations in favour of a broad understanding of nature conservation in an economic and social context (Godlewska, 2006). One of the most important examples in this regard was the establishment in 1968 of the Club of Rome, an organization of well-known intellectuals and industrialists. The Club's achievements include four reports: Interest in environmental issues and the future of the

world was manifested in the views of many scientists, as well as economic practitioners. Without going into the characteristics of the historical features of this problem, it should be noted that since the second half of the 20th century, a very intense evolution of views began regarding the active involvement of many countries and international organizations in favor of a broad understanding of nature conservation in an economic and social context (Godlewska, 2006). One of the most important examples in this regard was the establishment in 1968 of the Club of Rome, an organization of well-known intellectuals and industrialists. The Club's achievements include four reports:

- The limits of growth (Meadows et al., 1972);
- Humanity at a turning point (Mesarovic & Pestel, 1997);
- For a new international order (Tinbergen ed., 1978);
- Multiplier four, double prosperity – twice as little consumption of natural resources (Weizsäcker, Lovins & Lovins, 1999).

A significant event in the world regarding environmental protection was the publication in 1969 of the Report of UN Secretary-General U'Thant *The problems of human environment*. Among other things, the document drew attention to such issues as the rational use and development of natural resources, pollution of human living environment, and protection of environmental values. The necessity of international cooperation in this area was pointed out (Godlewska, 2006). An important place in the concept of sustainable development is occupied by the report *Our Common Future*, published in 1987. This do-document was the result of the work of the United Nations (UN) Commission on Environment and Development, established in 1983 and chaired by Gro Harlem Brundtland (Nasza wspólna, 1991). The report stressed that new sustainable economic development must be compatible with environmental stewardship. It proclaimed that mankind is able to make its social and economic development, and the satisfaction of human needs without harming future generations. That is, the problem of protecting the natural environment should not be seen as an obstacle in the way of socio-economic development (Nasza wspólna, 1991).

However, the most important event for the idea of sustainable development on a global scale was the United Nations Conference on Environment and Development known as the Earth Summit, held in 1992 in Rio de Janeiro. Participants of the conference, i.e., representatives of governments around the world, delegates of the UN, international organizations and non-governmental organizations expressed the belief that environmental issues should be interrelated with social and economic development, thus creating the concept of sustainable development. The participants of this Conference adopted five main documents:

- The Rio Declaration on Environment and Development, which defines the rights and responsibilities of countries in their efforts to promote human development and good living conditions;
- The Global Programme of Action for the 21st Century - Agenda 21, which is a program pointing to sustainable development in economic, social and ecological terms;
- The Declaration on the Protection of Forests, which contains directions for the sustainable development of forests, their protection and use;
- The UN Framework Convention on Climate Change, which aims to stabilize the content of greenhouse gases in the atmosphere, not threatening the climate system;
- The Convention on Biological Diversity, requiring the adoption of solutions and measures needed to preserve the diversity of species in nature (Final Documents, 1998).

The issue of sustainable development has also found its way into the interests of business activities. An example of the business world's action on environmental protection is the Business Charter for Sustainable Development, which was adopted in 1991 by the Second World Conference on Corporate Environmental Management. The charter is an international document containing the principles of a new strategy for environmental management in enterprises. It takes into account, among other things, the greening of products and services at the stage of their design, the prevention of environmental hazards, and the need to train employees in this regard (Poskrobko ed.,

1997; Poskrobko, 1988). In the context of the sustainability measures presented, definitions were created that synthesized the problem. For example, in the report *Our Common Future* compiled in 1987 by the United Nations Commission on Environment and Development under the chairmanship of Gro Harlem Brundtland, a social aspect was included in the concept of sustainable development. Sustainable development, is such economic and social development that ensures that the needs of contemporary society are met without compromising the ability of future generations to meet their needs (Our Common, 1991). An anthropocentric view of the concept of sustainable development was adopted at the Rio de Janeiro Conference (1992) in the Declaration on Environment and Development. This definition states that sustainable development consists of the rational management of natural resources, their protection, and forcing such technologies and institutional changes that will ensure that the needs of present and future generations are met (Final Documents, 1998). It should also be noted that in the Constitution of the Republic of Poland, enacted in 1997, in Article 5 it was adopted that "the state shall ensure the protection of the environment, guided by the principle of balanced development." Article 74 more broadly states: (1) Public authorities shall pursue policies that ensure environmental security for present and future generations. (2) Environmental protection is the responsibility of public authorities. 3) Everyone has the right to information on the state and protection of the environment. 4) Public authorities shall support the activities of citizens for the protection and improvement of the environment" (Constitution of the Republic of Poland, 1997). It is possible to express an obvious opinion that the quoted articles declare the goals - directions of the state's activities protecting ecological values and goods, important for the life of present and future generations. A similar thought is enshrined in the law "Environmental Protection Law", where sustainable development is defined as: "such social and economic development, in which there is a process of integrating political, economic and social activities, with preservation of natural balance and sustainability of basic natural processes, in order to ensure the possibility of satisfying the basic needs of particular communities or their citizens of both present and future generations" (Ustawa, 2001).

In the context of the coverage of sustainable development in the official documents presented, analytical definitions of this problem have also been appearing in the literature. Some of them are presented below. According to B. Poskrobko, sustainable development is such a way of conducting economic activity, shaping and using the potential of the environment and the organization of social life that will ensure the dynamic development of qualitatively new production processes, the sustainability of the use of natural resources, and the improvement (in the first period) and subsequent maintenance of a high quality of life (Poskrobko, 1998). This definition assumes that sustainable development, is socio-economic development that in the long term ensures the maintenance of utility and quality of the environment and its natural resources. The socio-economic and spatial aspect of sustainable development is pointed out by T. Boris. Sustainable development, is the socio-economic development of the relevant space, in which, in order to balance the opportunities of access to the environment of individual societies or their citizens - both present and future generations, there is a process of integrating political, economic, social activities with preservation of natural balance and sustainability of basic natural processes (Borys, 2001). From the definition above, it follows that sustainable development boils down to the integration of four orders: ecological, social, economic and spatial in order to form an adequate level of human quality of life (Borys, 2014). T. Borys clearly emphasizes that orderly sustainable and intelligent development is carried out directly through the subjective role of man, his quality of life and the level of his consciousness (Borys, 2016).

In light of the definitions presented, it is possible to express the view that sustainable development is now a fundamental category of civilization (Janikowski, 2007) in Europe and the world. Such a position can be further strengthened by referring to Immanuel Kant's theory that the idea of sustainable social development is a product of "practical reason", which in an object-oriented sense (in concerto) refers always to the concrete experience of people, indicating "certain maxims" of goals that precede the current actions of individuals. Kant wrote that the idea of practical reason is "always in the highest degree fruitful and for the activity of people indispensable," for it becomes, it is actualized, insofar as it is socially accepted. Then it becomes an "acting cause" for the formation of a higher level of morality and the building of a rationally better present and future (Kant, 1986). Following Ludwik

Krzywicki's theory of the wandering of ideas, it should be emphasized that any idea, including the idea of sustainable development, in its wandering in time and space, will be accepted wherever it hits a social and historical ground that is favorable in its persistence (Krzywicki, 1986). Thus, it is possible to express the conviction that the concept of sustainable civilizational development, as an idea of practical reason, which was first announced by Mrs. G.H. Brundtland (Nasza Wspólna, 1991) in the form of a general program premise and in the form of detailed assumptions - goals "in concreto", should be practically implemented in state policy, by local governments, civic organizations and associations, and by all economic entities. Such a demand relates to an ethical sense of responsibility for the humane, ecological and economic development of the world and its various regions - development that will bring satisfaction to everyone now and in the future (Sikora & Kaczocha, 2018). Thus, it should be emphasized that in the Kantian "spirit" the idea of sustainable development is a practical blueprint for a new civilization.

A review of the definitions of sustainable development and the discussion surrounding the idea shows that the essence of sustainable development (in analytical-ethical terms) is the equal treatment of the social, economic and natural spheres, with the primary goal of ensuring a high quality of life for society (Godlewska, 2006). The natural aspect includes, among other things:

- ensuring the maintenance of biodiversity;
- implementing the best available technology and technology (zero-, or low-waste, resource-, material-, and energy-efficient);
- organizing economic activities and social life in such a way that they do not co-locate with the goals of nature conservation.
- The economic aspect includes, among other things:
- the restructuring of the economy, especially industry, and rationalization of energy management;
- elimination from agricultural production and food processing of means and techniques that promote contamination of food and the environment;
- developing a forest management model in which the leading role is played by the environment, the creative value of the forest;
- reducing the nuisance of transportation, and reducing exhaust emissions by means of transportation;
- rationalization of the use and management of water resources;
- rationalization of the extraction and use of fossil resources;
- protection and shaping of living natural resources.

The social sphere concerns, among other things:

- shaping the environmental awareness of society;
- the need to promote sustainable consumption.

The idea of sustainable development in social theory and practice creates, therefore, a multi-dimensional system integrating society, nature and the economy. Functioning as a whole system is determined by the elements that make up this system, which include (Sikora & Kaczocha, 2018):

- natural capital, including the ecosystem and natural resources, affecting social well-being;
- human capital in the form of human and social health, education, knowledge, work and life experience, values, among others;
- social capital as a system of human ties, trust, interaction in accordance with formal and informal ethical, legal norms that promote access to resources;
- economic capital necessary in the creation of products, services to meet human needs - it includes land, finance, fixed assets, and human labor in the economy.

In the context of the above characterization of sustainable development, J. Famielec and S. Famielec rightly note that this development is not only a political category, but also a scientific one. Thus, the analysis of sustainable development requires the use of knowledge from various scientific fields and disciplines. The idea is interdisciplinary and cannot be an autonomous object of research of a single scientific discipline (Famielec & Famielec, 2016). Thus, the problem of sustainable development in theoretical-scientific and practical-political terms is very complex. The implementation of this idea into socio-economic practice is facilitated by (Poskrobko, 1997):

- democratization of social life, market economy system, minimizing social conflicts, removing obstacles to entrepreneurship, and innovative attitudes;
- implementation of management systems based on efficient, effective and effective, fair public legislation, forcing the consideration of economic, social and environmental issues in decision-making processes at all levels of public authority and in all areas of socio-economic life;
- establish and adhere to formal and administrative procedures for remediation of environmental damage and prevention of informal activities in this regard;
- implementation of strategic and operational eco-development programs at each level of management and in each organizational unit;
- implementation of comprehensive environmental information systems, taking into account the diversity of society in terms of perception;
- awakening and shaping the public's environmental awareness through formal and informal environmental education.

3. THREATS TO THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT IN NATURE, ECONOMY AND SOCIETY

Since the publication of the document *"Our Common Future. Report of the World Commission on Environment and Development*", which stated that new sustainable economic development must be compatible with environmental stewardship, more than thirty years have passed (1991). Thirty years have also passed since the publication of the "Final Documents of the United Nations Conference", "Environment and Development" - Rio de Janeiro (1992). It was there that the need to link environmental issues with economic and social development and the emergence of the idea of sustainable development was pointed out. In light of the three recent global catastrophes (climate catastrophe, coronavirus pandemic and the war in Ukraine), the question arises, do they not limit the implementation of international agreements on sustainable development? Is the idea of sustainable development losing its importance as an idea of practical reason of society and its power from the global to the local level?

The functioning of societies is determined not only by socio-cultural, political, demographic, economic factors, but also by natural factors (climate, terrain, plant and animal world, natural resources). This is because humans are part of nature (Januszek & Sikora, 2012). In answering the above questions, we first want to relate the idea of sustainable development to the natural plane and the related problem of global climate warming. The prevailing view in scientific discourse is that mankind is to blame for global warming. Man is the cause of global warming of the world, changing the precipitation regime, acidification of the oceans, violation of the balance of the ice sheets (Filipiak, 2022). The huge amount of greenhouse gases that mankind has already emitted and continues to do so has caused warming that will have irreversible effects for thousands of years. Melting glaciers are an example. UNESCO conducted a study to assess the impact of warming on 50 World Natural Heritage sites with glaciers. The UN agency concludes that in 17 areas of high ecological, landscape and cultural value, glacier formations will cease to exist by the middle of this century, and regardless of the level of warming achieved. A total of 460 lo-doves will be wiped off the map by the climate crisis. The doomed list includes the last glaciers in Africa (located in the massifs of the Kilimanjaro and Rwenzori - Virunga mountains) and many others in emblematic places in Europe and North America, such as the Italian Dolomites, the Pyrenees, and the American Yellowstone and Yosemite National Parks

(Climate Change, 2022). Greenland's ice sheet is disappearing four times faster than in 2003, and 95% of the oldest and thickest land in the Arctic is already gone. The Arctic could be ice-free as early as the summer of 2040. It is the atmospheric concentration of CO2 and other greenhouse gases produced by industry, transportation, agriculture, deforestation and the burning of fossil fuels, during human activities, that warms the planet and has the greatest impact on the Earth's climate. The emission of greenhouse gases into the atmosphere increases the energy present in it, leading to an increase in the occurrence of dynamic weather events. The number of extremely violent storms has doubled worldwide since the 1980s. Rising temperatures are causing not only hot weather, but also devastating wildfires. For example, a fire in Australia in 2020 killed about one billion animals (Borusiak, 2022).

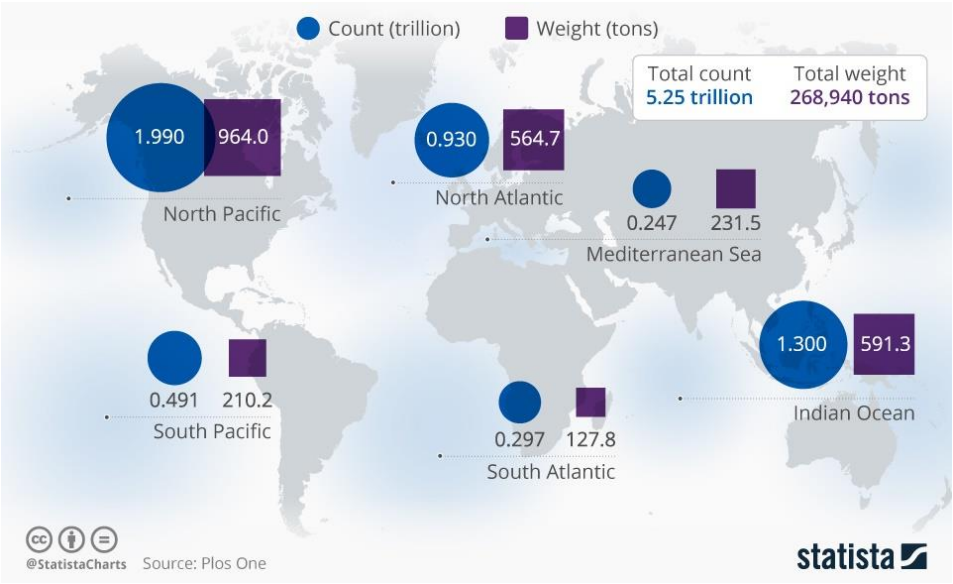
In response to the growing problems, the European Union focused on actions aimed at eliminating or reducing the negative impact of man on the environment in the long term. In 2020, the strategy of the European Green Deal (EGD - European Green Deal) was adopted, aimed at making the EU climate neutral in 2050 and indicating the directions of economic development without increasing the consumption of natural resources. The goal of the European Green Deal is to reduce net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels, and to achieve climate neutrality by 2050 (Communication..., 2019). The European Green Deal is an indispensable element of the implementation of the UN 2030 Agenda for Sustainable Development and the Sustainable Development Goals (United Nation, 2015). The implementation of the strategy is focused on the effective use of resources in a circular economy and at the same time reducing pollution and protecting biodiversity (Rowan & Galanakis, 2020). According to the assumptions of the European Green Deal, sustainable development and human well-being are at the heart of economic policy. They should be the basis for political decisions and resulting actions (Szpilko & Ejdys, 2022). The assumptions of the European Green Deal are shown in Figure 1.

Figure 1. Assumptions of the European Green Deal

Note. Communication…, 2019.

Climate warming is increasing the temperature of seawater, thereby increasing its acidity level. These phenomena will lead to the extinction of life-giving coral reefs, which act as a natural breakwater, within 50 years. The ocean is being treated like a garbage dump, and the amount of plastic in it in 2050 may exceed the weight of all living marine organisms. Currently, the mass of plastic in the world's oceans is estimated at almost 270,000. tons (Figure 2).

Figure 2. Plastic deposits in the oceans



Note. NiallMcCarthy, The World's Oceans AreInfested With Plastic, https://www.statista.com/chart/8616/the-worlds-oceans-are-infested-with-plastic/.

Among the elements of the Earth's natural capital, 40% of the soil is severely degraded. And between 1990 and 2020, some 420 million hectares of forest disappeared from its surface, an area larger than the European Union. The expansion of agriculture is responsible for 80% of global deforestation, as they are cut down in order to gain new land for cattle and animal feed (Borusiak, 2022).

Climate change also has a significant impact on the natural environment in Poland. In a monograph entitled *Climate Change in Poland*, more than thirty Polish climatologists have analyzed various aspects of climate change in our country. Among other things, it was pointed out that since the middle of the 20th century, and especially in the last three decades, climate change in Poland has occurred extremely rapidly in relation to changes in earlier periods. The rapid pace of these changes is caused by two factors: natural changes in atmospheric circulation and solar radiation, and changes caused by human impact, including, among others, the release of greenhouse gases into the atmosphere, which amplify the greenhouse effect (Falarz ed., 2021). An increase in sunshine, meaning that there are more sunny days and fewer cloudy days, the emergence of droughts is leading to steppe-formation process, especially in Greater Poland. There is also a significant decrease in the thickness of snow cover and its duration in Poland.

In addition to climate, significant factors changing the environment, its biological complexity (especially in rural areas) are modernization of the countryside and changes in the agricultural landscape. This is evidenced, among other things, by the differences between types of farms and their buildings of old and new types. The image of the traditional Polish countryside and farms is dominated by biodiversity. There are more different types of buildings, there are old trees, orchards, ponds. All of these provide a multitude of breeding and feeding grounds for birds. Old farms are populated by a greater number of bird species and a greater number of individuals than newer farms. In villages where new houses account for no more than one-tenth of the buildings, 20-30 bird species lived. Where new houses accounted for 40-50%, 8-10% nested. Due to modernization of the countryside, abandonment of old farms and their owners moving to cities or modernizing them, the richness of bird species in the Polish countryside will decrease. These changes cause a threat to the natural value of traditional villages and farms and households. They lead to a decline in biodiversity in the agricultural landscape, which is still unique compared to other Western countries. Biodiversity is impoverishing in these countries. Monocultures predominate in agricultural areas, which contribute to the loss of insect species, birds, and do not provide food or shelter for the rich faunal community. For example, as a result of socio-economic activities in the countryside, changing the architecture of the countryside, almost 70% of sparrows have been lost across Europe since the 1980s (Ślązak, 2021).

The changes taking place in the area of nature as an element of sustainable development are an ongoing process. They are taking place and will take place not always fully noticeable to us, but consistently. Gradually, they will be noticeable in the deteriorating living conditions, agricultural activities, the presence of individual plant and animal species in their natural habitat to date. A new report by the Intergovernmental Panel on Climate Change (IPCC) was released in 2022. Its conclusions are not optimistic. The report indicates that today as much as 80% of energy (electricity, heat), in transportation, industrial pro-duction, for agriculture, which accounts for a third of emissions, our civilization obtains from coal, oil and natural gas. According to the latest data of the IPCC report, it follows that even if we manage to reduce greenhouse gas emissions by 43% by 2030 (which is impossible), we may still fall short of our goal of stopping climate warming by 1.5 degrees C. So, big challenges lie ahead for every area of the economy, be it industry, transportation, construction, agriculture and other land-use activities. It is Ko-needed to depend on fossil fuels, as it not only causes a climate crisis, but also exacerbates human poverty, contributes to numerous conflicts, and threatens the energy security and economic development of many countries (Przegrywamy walkę, 2022).

The riches of nature, its biodiversity in the idea of sustainable development is combined with the economic factor of this idea. Nature is a significant capital in the development of the economy of any country and the global economy, and its protection requires large costs. In 2021, the UN Environment Programme (UNEP), the World Economic Forum (WEF) and the Economics of Land Degradation (ELD) Initiative organizations produced the "State of Finance for Nature" report on the expenses needed to save nature and civilization along with it (https://www.youtube.Com/watch?v=IVrS QdwyEjg). According to it, humanity should invest $8.1 trillion by

2050 to cope with climate change and nature degradation. According to the report's authors, nature should be at the center of economic decisions. To achieve this state of affairs, among other things, it is necessary to bet on more sustainable development, reshuffle subsidies currently allocated to agriculture and fossil fuels, and introduce new economic and legal incentives. It is also necessary to increase the participation of private business and banks in financing investments in this area. Investments in nature not only protect the Earth as a planet, but also benefit animals, plants and humans. They improve the quality of life and create jobs. If nature is not saved then there can be no sustainable development. Loss of biodiversity is already costing the global economy 10% of its annual production (State of, 2021). This report is a motivation for all countries, financial institutions and companies to invest in nature, including forest restoration, regenerative agriculture and ocean conservation. These actions can help reconcile economic development with the Paris Agreement's climate goals. The riches of nature, its biodiversity in the idea of sustainable development is combined with the economic factor of this idea. Nature is a significant capital in the development of the economy of any country and the global economy, and its protection requires large costs. In 2021, the UN Environment Programme (UNEP), the World Economic Forum (WEF) and the Economics of Land Degradation (ELD) Initiative organizations produced the "State of Finance for Nature" report on the expenses needed to save nature and civilization along with it (https://www.youtube.Com/watch?v=IVrS QdwyEjg). According to it, humanity should invest $8.1 trillion by 2050 to cope with climate change and nature degradation. According to the report's authors, nature should be at the center of economic decisions. To achieve this state of affairs, among other things, it is necessary to bet on more sustainable development, reshuffle subsidies currently allocated to agriculture and fossil fuels, and introduce new economic and legal incentives. It is also necessary to increase the participation of private business and banks in financing investments in this area. Investments in nature not only protect the Earth as a planet, but also benefit animals, plants and humans. They improve the quality of life and create jobs. If nature is not saved then there can be no sustainable development. Loss of biodiversity is already costing the global economy 10% of its annual pro- duction (State of, 2021). This report is a motivation for all countries, financial institutions and companies to invest in nature, including forest restoration, regenerative agriculture and ocean conservation. These actions can help reconcile economic development with the Paris Agreement's climate goals.

The Polish Economic Institute (PIE) has prepared a report titled: "*Seven Emitters' Time and Cost to Achieve Climate Neutrality"* (2022). The report found that the E 7 countries in the climate fight need to invest $67 trillion by 2030. The seven largest emitters (E 7) - China, the United States, the European Union, India, Russia, Japan and Brazil - account for almost 72% of global GDP and 66% of global CO2 emissions. The report stresses that maintaining the Paris Agreement's 1.5-degree Celsius target not only means spending $67 trillion, but also indicates that this amount means the equivalent of 7.6% of global GDP in 2019 and 10.6% of the E7 countries' GDP in 2019 (Seven, 2022). The document points out that based on current trajectories, it is estimated that the EU will reach net zero greenhouse gas emissions in 2056, the US in 2060, China in 2071, and Russia as late as 2086. Thus, no economy in the E7 will reach net zero emissions by 2050. The report stresses that so far, the EU has pledged $625 billion in its programs to meet the climate neutrality goal. According to PIE's calculations, the EU will need to increase investments to $7 trillion in the current decade. Annually, this translates into 4.5% of the EU's 2019 GDP. Japan will have to invest about 6% of 2019 GDP annually, the US - 6.3%, Brazil - 7.2%, India more than 19%, China - 22%, and Russia nearly 27%. The question is whether these are feasible investments to secure the realization of sustainable nature?

The issue of action to halt climate change was taken into account during the "Strategy for the Earth" debate at the PRECOP 27 conference in Katowice (October 2022). It was emphasized there that globally $100-150 trillion will have to be spent on the transformation related to fighting the climate crisis, energy transition in the world. Action in this direction will not be able to succeed without the involvement of large and smaller business and the financial sector. In Poland, 275 to 365 billion zlotys are planned to be spent on the green transformation in the decade to 2030. With public funds, i.e., government funds, local government funds and funds coming from the European Union, the amount will be enough for about 15% of the financial needs (Żeby nie przegrzać..., 2022). The

remainder of the funding, is intended to be obtained from commercial business. There is a big question mark over whether, without the right motives, incentives, it will be possible to get private businesses, large and small, and financial institutions to participate in stopping the climate crisis?

The basis for implementing the green transformation strategy must be cooperation. It should take into account two elements, that is, awareness of the creation of goals and evaluation of the effects. Changes should take into account the use of new technologies, innovations, the emergence of new companies, new professions. Green transformation, if it is to be effective and efficient, to promote sustainability in nature, should be based on renewable energy sources.

The post-pandemic crisis, the consequences of the war in Ukraine, and inflation have contributed to difficulties in the energy market, which are being felt by everyone, including businesses. Increases in energy prices, and consequently also in the cost of operating companies and households, can become an impetus to change the energy management processes of enterprises, to verify existing sustainable development strategies and to seek savings in new areas where investment and savings are valued. Examples in this regard include photovoltaic installations and windmill power plants, even domestic and enterprises' own. These investments benefit investors, contractors, local government and the local community. It is estimated that currently in Poland local governments receive about a billion zlotys a year from property tax on wind farms. This tax covers 40% of the value of a wind power plant. This means, with the current parameters of wind turbines, that from one windmill the self-government receives to its budget between 80 and 110 thousand zlotys. per year. Assuming that about a thousand more windmills could be installed on land in Poland, local governments could get another billion zlotys a year. It is also very important that the best conditions for building wind farms are in rural agricultural municipalities, including post-state farm communities, which are generally indigent. These rural areas would be greatly helped by wind turbines for socio-economic development in line with the idea of sustainable development (Krzeminski, 2022).

A threat to the realization of sustainable development in the natural, economic and social areas is air pollution, as exemplified by the smog problem. A study conducted in 2022 by the European Coalition for Public Health, in which the Polish Association of Health Programs participated, shows that it costs more than a thousand zlotys per family per year to treat diseases caused by smog. Three Polish cities ranked among the top four most polluted cities in the world. According to the Swiss IQ Air index, Dakka, Bangladesh, took first place, followed by Warsaw, Wroclaw and Krakow, and Poznan ranked twelfth. According to various estimates, 45,000-47,000 people die in Poland due to air pollution. A study by researchers from Harvard University and University College London has also emerged, which puts the figure in Poland at nearly 100,000 people. These are victims of smog-induced diseases, such as POHP (chronic obstructive pulmonary disease), whose early treatment is also costly. The health effects lead to economic and social losses, reduced quality of life due to lower life expectancy, higher health care expenses and lower efficiency. According to the report, Poland has incurred a total of PLN 15.4 billion in costs for treating patients. Almost two-thirds of these costs (64%) were generated by coal-fired heating equipment, which amounted to PLN 9.8 billion. Another energy carrier co-responsible for generating the burden due to pollution was wood stoves, which accounted for 23% of the health costs, an amount of PLN 3.5 billion. The report also takes into account electric and district heating in large cities, where consumers do not emit pollution directly, but it is generated at power plants. They account for a small part of the overall costs - only 6%. The in-depth study covered 4 countries, Poland fared the worst. In our country, the total cost of health effects per household, is 228 euros per year. In Italy, it's 180 euros, and the EU average, 130 euros per family. Spain, at 65 euros, and the UK, at 92 euros, fell below the average. The report's authors call on governments and local governments to support the transition from fossil fuel heating to alternative sources. They also fear that rising energy prices will economically force households to use coal and other fuels for domestic needs, however (Kosztowny, 2022). This situation, is occurring now, and thus contradicts the principles of sustainable development.

The social manifestation of disregard for sustainability is people's mental health problems, anxiety, stress, post-traumatic stress syndrome. These are primarily linked to climate change in the form of floods, fires, pandemics, and the destruction of biodiversity. In an interview with Polish Science, ecologist professor P. Skubała of the University

of Silesia in Katowice said: "Life on our planet is a huge web of interconnections. We humans are one of the threads of this network, also important as the others and dependent on the existence of others. Thus, the guarantee of our survival and security on Earth is the preservation of biodiversity at different levels of life - genetic, species and ecosystem. Either we understand this and feel that we are part of nature, or we will destroy many species, the relationships between them, and between ourselves" (Ekolog: tylko…, 2021). Professor Skubała stresses that biodiversity is a kind of vaccine that protects people from the threats of viruses and diseases. Many new diseases such as Ebola, AIDS, SARS, avian and swine flu, COVID-19 are the consequence of brutal human interference with natural ecosystems. Thus, preserving biodiversity reduces the chance of transmission of pathogens from animals to humans. It allows viruses to remain and disperse in a biodiverse natural environment. Thus, they create less of a threat to humans. The ecologist believes that preventing a pandemic is economically viable because the costs are much less than the costs of responding to another such situation. For example, experts at the Intergovernmental Panel on Biodiversity and Ecosystem Services report that preventing pandemics is 100 times cheaper than current strategies of finding pandemics and developing drugs (Ekolog: tylko…, 2021).

The presented problems of sustainable development and, above all, the effects of its reduction are connected with people and their state of environmental awareness and behavior. The Ministry of Climate and Environment in Poland has been conducting empirical ba-das on the environmental awareness and behavior of Polish residents for the past ten years (Awareness Survey, 2021). The results of these surveys indicate that the biggest challenge for Poland to solve is environmental protection. This was chosen by 52% of residents. According to respondents, the biggest environmental problem is air pollution (59%), the waste problem (50%) and water pollution, the water problem (34%). The most frequently indicated reason for protecting the environment is concern for future generations (73%) and care and concern for human health (63%). Nature, as a value in itself, is the reason chosen by 49% of respondents. One in ten respondents indicated frugality and economic reasons. In the opinion of Polish residents, the state of the environment depends to the greatest extent on the activity of each of us (69%). In turn, the most popular sources of information about the environment are the Internet (72%), television (65%) and the press (27%). It should be noted that the results of these surveys indicated that education as a source of information about the state and protection of nature was lacking (Awareness Survey, 2021). The presented problems of sustainable development and, above all, the effects of its reduction are connected with people and their state of environmental awareness and behavior. The Ministry of Climate and Environment in Poland has been conducting empirical research on the environmental awareness and behavior of Polish residents for the past ten years (Awareness Survey, 2021). The results of these surveys indicate that the biggest challenge for Poland to solve is environmental protection. This was chosen by 52% of residents. According to respondents, the biggest environmental problem is air pollution (59%), the waste problem (50%) and water pollution, the water problem (34%). The most frequently indicated reason for protecting the environment is concern for future generations (73%) and care and concern for human health (63%). Nature, as a value in itself, is the reason chosen by 49% of respondents. One in ten respondents indicated frugality and economic reasons. In the opinion of Polish residents, the state of the environment depends to the greatest extent on the activity of each of us (69%). In turn, the most popular sources of information about the environment are the Internet (72%), television (65%) and the press (27%). It should be noted that the results of these surveys indicated that education as a source of information about the state and protection of nature was lacking (Badanie świadomości, 2021).

The climate crisis and biodiversity crisis have reached such a scale that they are becoming a threat to humanity, requiring decisive action, including education. Structured green education shapes public awareness and broadens knowledge of human impact on the environment, creates conscious attitudes of responsibility for the state of nature. Meanwhile, at present, climate education is widely carried out with the participation of the social movement and not by educational institutions. It is precisely schools at the primary and secondary levels that should raise environmental awareness among the younger generation on a sound scientific basis and promote the principles of sustainable development. An interesting example of the development of environmental education is the agreement of several

universities in Poland. The authorities of the Maria Curie-Skłodowska University in Lublin (UMCS), the University of Warmia and Mazury in Olsztyn (UWM) and the University of Gdansk (UG) have signed an agreement on the establishment of the Green Universities Forum. The three universities will undertake joint initiatives for sustainable development. The aim of the forum is to maximize contributions to sustainable development in scientific, research, environmental, social, economic and educational dimensions. It is an effort to raise public awareness and its influence in caring for the common natural heritage (Forum Zielonych, 2022).

The demand for knowledge of green competence in society, as exemplified by the high level of environmental awareness among Poles, is growing. The creation of conscious attitudes in terms of responsibility for the state of the environment, the implementation of the idea of sustainable development is also taking place in some local communities. An example is the training and consulting program called "Green Leader" implemented by the Sędzimir Foundation and supported by the Polish-American Freedom Foundation. The purpose of the program is to support local leaders in environmental protection and sustainable development activities. The Green Leaders are to be representatives of local government and administration, municipal and county councils, community organizations and activist groups. The program is aimed at leaders who are willing and able to implement environmental and climate-related changes in their communities. They want to exchange good practices, learn models from others and develop themselves using new solutions (Czas na zielonych, 2022).

4. SUSTAINABLE DEVELOPMENT IN THE CONTEXT OF THE WAR IN UKRAINE

Man by his activity strives for the realization of the idea of sustainable development, but also by his behavior destroys the principles of this idea. An example of the nullification of the values of sustainable development of modern civilization (nature, economy, people) are armed conflicts, most notably the war in Ukraine. This conflict brings not only human losses, but also massive environmental damage. Environmental losses caused by the Russian invasion exceeded 36 billion euros (over 174 billion zlotys), emitted CO2 emissions of 31 billion tons. That's about as much as New Zealand emits annually. The war has also contaminated soils. According to calculations by the Ukrainian government, the destruction of the land amounts to losses of about 11.4 billion euros. The soil contains ammunition fragments of destroyed industrial and thermal power infrastructure, oil depots, hazardous substances that poison groundwater and cause irreversible environmental damage. One-fifth (20%) of Ukraine's protected areas are threatened, including 2.9 million hectares belonging to the pan-European Emerald network. So far, losses affecting forests, which cover 16.7% of the country, have been valued at about €440 million. Ukraine has 56 national parks, which together cover 2.4% of the country's total area, and are also vulnerable to destruction, to so-called "environmental terrorism" (Kuffel, 2022). Thus, the Russian invasion of Ukraine has caused significant environmental and climate damage, which will take years and high costs for the international community to repair, Ukrainian representatives said at the recent climate summit in Egypt - COP 27 (Popiołek, 2022). War kills not only people, but also wildlife, generates pollution and completely rebuilds ecosystems. There are losses in water resources and forests (they have been mined). The consequence of Russian aggression, therefore, is that the attention of the international community is directed more to the conflict in Ukraine than to the joint fight against climate change. Climate problems require restructuring of the economy. When there is no economy in Ukraine, it cannot be restructured either. According to calculations by the Polish Economic Institute, the climate cost of the Russian invasion of Ukraine in the moderate scenario will be 212.7 million tons of CO2 equivalent. This represents 6% of the equivalent of all European Union greenhouse gas emissions in 2022 and 53% of Poland's direct annual CO2 emissions (Popiołek, 2022). Ukraine also says it wants to rebuild a greener, low-carbon economy after the war. The Polish Economic Institute has calculated in this situation that rebuilding Ukraine's green economy would avoid up to 115 million tons of CO2-equivalent emissions and reduce climate costs by 8.9 billion euros. Green reconstruction will also be necessary due to the fact that as much as 4,000 MW of renewable energy sources (RES), or 24% of Ukraine's installed RES capacity, has been damaged and destroyed (Popiołek, 2022). Thus, a problem exists that will take many years to solve from a position of sustainable development.

In the context of the presented difficulties of sustainable development of nature, society and economy, the questions arise, is this development still possible? should it wait for better times? will the financing of sustainable development be an additional ballast for the economy, or on the contrary, will it become an impetus for its growth? Considering not only the process of climate warming but also the COVID-19 pandemic and its aftermath, as well as the war in Ukraine and the related energy crisis, clear-sounding answers to the above questions are difficult. However, it should be clearly emphasized that the pandemic, the energy crisis, the war in Ukraine have not cancelled out climate change and thus cannot be a barrier to the introduction of sustainable development principles into the economy, nature and society.

5. CONCLUSION

Economic, geopolitical and socio-consciousness conditions will play a leading role in the implementation of the idea of sustainable development in the current situation, especially regarding climate warming. The climate crisis from an economic and business point of view can be a strategic element for various companies and their marketing activities. In their strategy, companies must not set their sights on profit made here and now, in the short term. Taking into account economic rationality, the profitability of operations, companies should direct their interests to the perspective of the long term, keeping in mind the goals of climate and sustainable development. It is necessary in this direction to mobilize financial resources and activity of private business. However, these activities must be supported by legalization changes, legal stability and communication with business. It is necessary to move in the direction of decarbonization and reduction of gas emissions.

Climate improvement and sustainable development must be combined with investments in renewable energy sources, which stabilize energy shocks, mitigate the effects of the economic crisis, and are acyclical in nature. They bring concrete benefits, such as independence from fossil fuel imports (not only from Russia), self-sufficiency and energy security needed by the entire economy, households and society. They mitigate extremes in the energy market in the form of price changes, create new valuable jobs, reduce greenhouse gas emissions for the benefit of the climate, nature, economy and society. They are therefore conducive to the development of the idea of sustainable development, the idea of rational human reason. These actions should not be viewed in terms of current costs, but primarily in terms of social and economic benefits for nature and society. The costs of not making decisions and not realizing the energy transition are greater (Jak pogodzić, 2022).

The geopolitical factors of climate change and thus sustainability relate to the international situation related to the war in Ukraine, the effects of pandemics, the transparency of legislation in this area and its application. The global energy market crisis has become a factor in pushing the idea of sustainability to the side-lines. The strategy of ensuring the livelihood of companies and the ability to continue operations has gained more attention. It therefore becomes necessary to accelerate investment in a rational energy mix that includes the development of renewable energy sources, hydrogen and nuclear power. Self-sufficiency, security, mitigation of extreme phenomena in the energy market (high prices) will guarantee the need to take care of sustainable development.

The third factor that promotes or hinders the application of sustainable development principles is public awareness. One cannot marginalize how people actually think and evaluate. It would be necessary to widely explain, educate, what is the rationale of certain actions and solutions related to energy, climate, sustainable development. Human communities particularly vulnerable to the effects of climate change, to smog, need to be protected, supported, encouraged to join the transformation. However, the basic condition conducive to the implementation of the idea of sustainable development, shaping the socio-economic base for people's "practical reason" in the field of nature protection, economic and social development is cooperation, integration of business, science, social organizations, public administration (government and local government) on a global and local scale.

The issues presented in the article, especially those relating to climate change, were discussed in December 2022 at the United Nations Conference (COP 27), at the so-called Climate Summit in Sharm el-Sheikh, Egypt. The resolutions agreed there would require a separate article.

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