

## NATURAL RESOURCES AND NATIONAL SECURITY: A STRATEGIC PERSPECTIVE OF THE EU MEMBER STATES

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**Abstract.** *This article analyzes the natural resources from the perspective of the national security of the European Union member states. In general, the national security strategies of each country contain the objectives of protecting its national interests. At the same time, one of the objectives consists of the interdependent relationship between national security and other strategic areas that ensure the maintenance of strategic goods and services within normal parameters. In this context, natural resources are key and indispensable elements for economic and technological development, which must be protected and used sustainably. Several specialized studies present specific analyzes of natural resources from the perspective of environmental protection and combating climate change, and the shortage of natural resources, especially non-renewable resources, represents a top priority in the national security strategy of every country. The aim of this article is to present the approach to natural resources from the perspective of national security through an exploratory analysis of the security strategies of 15 member states and the influence of sustainable use of natural resources on environmental security. Thus, the phrase "natural resources" is mentioned 43 times demonstrating the national interest in natural resources and their protection against various threats. At the same time, the three types of natural resources: energy, water, and food are highlighted in a very high percentage as resources of strategic importance for the analyzed countries, and their security represents a basic element of national security. Moreover, the fierce competition for possessing or exploiting natural resources can turn into tense situations, retaliatory violence, or armed conflict. This article highlights a multidimensional relationship between natural resources and national security. Moreover, the results of certain studies in this respective field regarding the influence of natural resources on environmental security are confirmed.*

**Keywords:** *climate change; conflict; EU Member States; natural resources; national security strategies; sustainability.*

### Introduction

Over the years, natural resources have been a topic of interest for state and non-state actors, generating crisis situations or conflicts at the local, state, regional, and global levels. Most of these resources are vital for the population, and the process of transforming natural resources into consumable or usable goods and services is ensured by economic, industrial, energy, transport infrastructures, etc. Some public and private infrastructures have been designated by several states as national critical infrastructures, according to a number of sectoral criteria established by normative acts.

A state's natural resources represent its economic stability and national security coordinates. Regarding economic stability, exploited resources can influence society's economic growth and well-being. Considering that resources can be exhausted, their rationing or limitation represents a factor of progress and their exploitation and processing should be more efficient by using appropriate and innovative technologies. At the same time, the scarcity of natural resources represents a major problem with a negative impact on the economy and society, and implicitly on national safety and security. From the national security perspective, natural resources support the defense industry and contribute to ensuring a state of normality, and therefore the hybrid threats targeting natural resources and critical infrastructures must be mitigated by the national security organizational structures.

In this article, natural resources are analyzed from the perspective of the national security of the member states of the European Union. Thus, for that purpose, this research is based on the analysis of the national security strategies of the EU member states, in accordance with the literature review.

### **Literature review**

The functioning of society and the economy depends on natural resources. They represent the basis of most production processes and supply much energy for transport, light, and heat worldwide. (Andersen, Marin & Simensen, 2018). At the same time, society's resources depend on technological development. Along with technological innovation comes the possibility of exploiting new resources, which reinforces the idea that the stock of natural resources may be limited at certain times. The exploitation of natural resources represents, on the one hand, a problem of social choice based on a specific analysis of social benefits and costs. On the other hand a problem of political deliberation (Pichler et al., 2017). The more today's society exploits natural resources, the more political decision-makers must not ignore the distant future, which may come with much higher costs as a result of long-term effects on the physical environment (Lampert, 2019).

In the literature, the shortage of natural resources is analyzed from several perspectives, which interfere with each other and provide an interdisciplinary framework: environmental management and climate change, economy and social welfare, sustainable development, digitalization, and, last but not least, national security. Drăcea et al. (2020) emphasize that environmental specialists have been trying for years to find sustainable methods of natural resource conservation to ensure environmental protection and generate income. Most countries have integrated climate change measures into national policies, strategies, and planning. The study by Oláh et al. (2020), shows that sustainability is very important for economic growth in the context of the shortage of natural resources. Thus, the conservation and protection of natural resources is a sustainable solution for the economy, and the possibility for natural resources to regenerate and be used responsibly in the production process is an ideal situation. Several studies highlight the effects of digitalization on natural resources (Mai et al., 2022; Barteková & Börkey, 2022; Santarius et al., 2020). These studies show the beneficial effects of information and communications technology (ICT), modern equipment, and artificial intelligence-based technologies on economic growth, energy reduction, and environmental impact reduction in sustainable development. At the same time, Eerola et al. (2021) point out that digitalization requires an infrastructure that

supports the hardware and software needed to store a high volume of information, which leads to increased requests for raw materials. In this context, mineral resources have become a crucial issue for sustainable development. At the same time, from an economic perspective, there is a direct relationship between digitalization and sustainability by the fact that "digitalization influences sustainability practices, and the factors that lead to the adoption of sustainability, internal and external, influence the digital transformation of companies" (Pânzaru et al., 2022, p. 38).

In recent years, individuals pay greater attention to the over-exploitation of natural resources and environmental protection. Kang et al. (2022) consider natural resources to be essential for human long-term survival and development. The lack or deficit of natural resources determines the states to solve these problems through sustainable development methods and resource security which occupies an important position in national security. In the future, people will face several ecological crises, including crises specific to sustainable development. So, in this context effective coordination between natural resource security, environmental stability, and sustainable development is necessary. Constantinescu (2015) states that a country's dependence on exploiting its own natural resources does not affect security, but national security may become vulnerable in the longer term. The depletion of non-renewable resources without a sustainable alternative can seriously affect a country's economic and social development. Thus, the competition over natural resource access, especially mineral ones, represents an economic and security problem for developed states and a factor of instability for resource-exporting countries. One of the concerns of many countries worldwide is ensuring energy independence. Dźwigoł et al. (2019) state that energy independence has become a component of energy security playing a key role in national security. The authors highlight the interdependence between energy, economic development, and national security. This approach is also found in Mara et al., (2022). Moreover, these authors argue that energy security should not cause deep tensions between countries.

Natural resources can be an important source of funding for conflicting parties. With this support, the duration of a conflict can be prolonged, infrastructure for global supply chains can be affected, and the environment can suffer significant damage. The European Union's approach to conflict prevention and crisis management is deployed in a full range of policy tools to reduce trade in natural resources necessary for conflicting parties (Vlaskamp, 2019). One of the restrictive policies is based on the application of economic sanctions. The best example is the application of several progressive EU economic sanctions against Russia in response to Russia's invasion of Ukraine on February 24, 2022 and subsequent military actions on Ukrainian territory. Even from the first months of the conflict, a strong response was given to Russia's aggression through economic pressures. Once the conflict continued, the United States was the first to impose economic sanctions that banned the import of oil, liquefied gas, and coal. At first, the European Union was reluctant to such measures due to the dependence of certain European states on Russian supplies, but after the atrocities progressed, it imposed economic sanctions (Chachko & Heath, 2022). According to the Council of the EU (2022), economic sanctions were taken by the EU on Russia on finance, energy, technology, dual-use goods, industry, transport, and luxury goods. Moreover, these sanctions have been extended from July 26, 2022 to January 31, 2023.

## Research methodology

In this study, it is carried out an exploratory quantitative analysis of the national security strategies of certain EU member states regarding the approach to the concept of natural resources. This study highlights the strategic relationship between natural resources and national security, starting from two hypotheses based on the literature. The first hypothesis ( $H_1$ ) refers to the approach to natural resources from the perspective of interests, values, and national security objectives: the phrase natural resources is specified in the content of security strategies. The second hypothesis ( $H_2$ ) refers to current security issues in the context of climate change: the shortage of natural resources and limited access to them with a strong impact on the security environment.

The strategic documents in this research are the official documents of the EU member states (Table 1), represented by the National Security Strategy (NSS), the National Security Concept (NSC), the National Defense Strategy (NDS), the National Security and Defense Strategy (NDSS), Foreign and Security Policy (FSP), National Defense Strategic Concept (NDSC) and White Paper (WP). Moreover, each country approaches the national security strategy differently and these legal provides a conceptual basis for the policies, principles, directions of action, and mechanisms necessary to ensure security (Lipinsky et al., 2019).

**Table 1. National security strategies validated for study by the author**

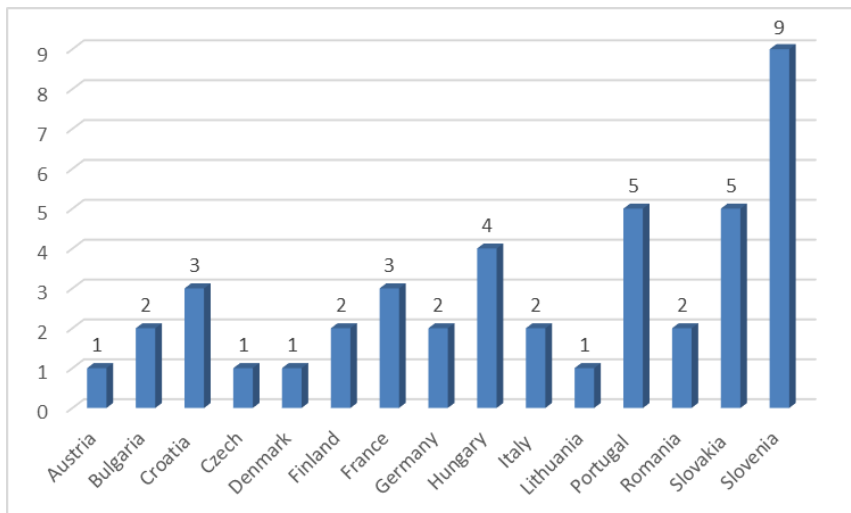
Country	Year	Type	Issuer	National	English
Austria	2013	NSS	Ministry of the Interior	-	<input type="checkbox"/>
Bulgaria	2018	NSS	Government	<input type="checkbox"/>	-
Croatia	2017	NSS	Ministry of Defence	-	<input type="checkbox"/>
					<input type="checkbox"/>
Czech R.	2015	NSS	Ministry of Foreign Affairs	-	<input type="checkbox"/>
					<input type="checkbox"/>
Denmark	2022	FSPS	Ministry of Foreign Affairs	-	<input type="checkbox"/>
					<input type="checkbox"/>
Finland	2017	NSS	Government	-	<input type="checkbox"/>
					<input type="checkbox"/>

France	2017	NDSS	Ministry of Defence	-	<input type="checkbox"/>
					<input type="checkbox"/>
Germany	2016	WP	Government	-	<input type="checkbox"/>
					<input type="checkbox"/>
Hungary	2020	NSS	Government	-	<input type="checkbox"/>
					<input type="checkbox"/>
Italy	2015	WP	Ministry of Defence	-	<input type="checkbox"/>
					<input type="checkbox"/>
Lithuania	2021	NSC	Ministry of Defence	-	<input type="checkbox"/>
					<input type="checkbox"/>
Portugal	2013	NDSC	Government	-	<input type="checkbox"/>
					<input type="checkbox"/>
Romania	2020	NDS	Presidential Administration	-	<input type="checkbox"/>
					<input type="checkbox"/>
Slovakia	2021	NDS	Ministry of Defence	-	<input type="checkbox"/>
					<input type="checkbox"/>
Slovenia	2020	NSS	Ministry of Defence	-	<input type="checkbox"/>
					<input type="checkbox"/>

Therefore, the first step of this methodology consists in excluding states that have not developed or present public official documents, because it might impose research limitations. This way, 4 countries are not the subject of this study: Cyprus, Greece, Ireland, and Malta. Furthermore, the official documents of the 23 member states, except Bulgaria's national strategy, were found in English on the websites of the institutions in charge by using the Google search engine. However, this was not an impediment and represented the second step of this study. The third step consists of searching and finding the phrase natural resources in the national strategies of 15 member states, representing the documents validated for this research. Accordingly, Belgium, Estonia, Latvia, Luxembourg, the Netherlands, Poland, Spain, and Sweden that do not mention the phrase natural resources in the documents are excluded from this study, even if there are some general references regarding natural resources or certain types of natural resources.

### Research results

The national security strategies of the EU member states highlight the importance of natural resources and the national interests regarding their possession, exploitation, management, and security. In the content of the analyzed documents of all 15 national strategies, the phrase natural resources are mentioned 43 times. Figure no.1 shows the number of mentions of the phrase natural resources corresponding to each member state. Next, the main aspects associated with natural resources, resulting from the research, are presented for each member state.



**Figure 1. The number of occurrences of the terms "natural resources" (data processed by the authors)**

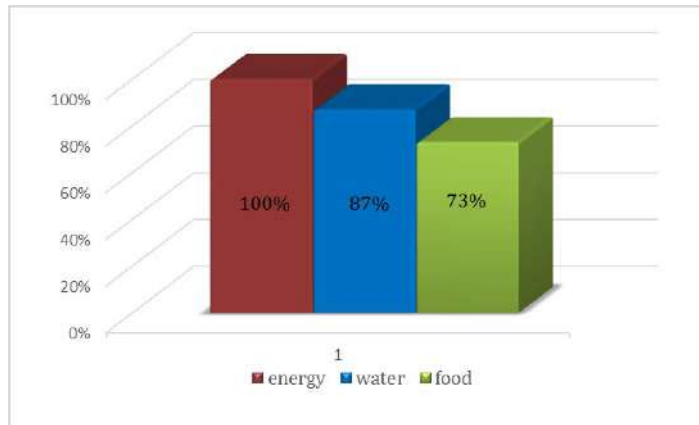
Thus, the phrase natural resources is mentioned 9 times in Slovenia's national security strategy. One of Slovenia's strategic interests in conserving the environment and natural resources. Therefore, limited natural resources are considered risks and threats in the international security environment. The protection of natural resources and the environment is ensured by European frameworks for policy and national strategies on the environment and sustainable development. Restricted access to natural resources,

especially energy, and water, as an indirect consequence of climate change, leads to political, social, and economic instability. Moreover, competition for water resources or scarcity causes conflict situations or armed conflict. After Slovenia, the phrase natural resources is mentioned 5 times in Portugal's national security strategy. The Strategic Concept of National Defense is heavily debated on natural resources. Thus, the dispute over exploiting and controlling limited natural resources (hydrocarbons, water, and mineral resources) can generate violent competition, and natural resource scarcity (water and energy) can generate armed conflict. In addition, the document emphasizes the role of human resources in Portugal's economic and social development, which requires a simultaneous improvement of human and natural resources. There are 5 mentions of natural resources in Slovakia's national security strategy. The problems with natural resources are analyzed from two perspectives. The first highlights the influence of natural resource consumption on climate change and the environment, which can generate conflict and forced migration. The second perspective presents the influence of economic growth on natural resources and the transition to a circular and sustainable economy, through creating and protecting specific stocks of strategic raw materials. In Hungary's national security strategy, the phrase natural resources are mentioned 4 times. The introduction presents that the evolution of climate and demographic changes in accordance with the depletion of natural resources and illegal migration represent global challenges. Within the framework of the strategy, Hungary recognizes that its natural resources are limited, and the lack of vital resources can generate interstate and intrastate conflicts. Therefore, protecting natural resources, especially water reserves, drinking water supply, and arable land, are key elements of national security. In Croatia's national security strategy, where there are 3 mentions of the phrase natural resources, there are presented on the one hand, the necessity of protection natural resources against natural or man-made disasters, and on the other hand, the conservation of natural resources and protection of the environment for a very long time in various areas of the country, as well as the achievement of a sustainable economy that is necessary to safeguard the prosperity and well-being of individuals. There are also 3 mentions of the phrase natural resources in France's national security strategy. The national security and defense strategy presents a series of national security challenges upon the territorial integrity, some of them coming from Overseas territories, where monitoring, supervision and intervention by certain public administrations and military structures are required to counter the looting of natural resources, drug trafficking, illegal migration and uncontrolled urbanization. There are 2 mentions associated with the phrase natural resources in the national security strategies of Bulgaria, Finland, Germany, Italy and Romania. Thus, in its national security strategy, Bulgaria frames the rational use of natural resources as an important objective of national interest. Also, natural resources are listed as one of the factors that create tensions and generate conflicts. Finland deals with the topic of natural resources from the perspective of environmental protection and climate change, mentioning in the document two national agencies responsible with the preservation of the environment and natural resources: The Finnish Environment Institute and The Natural Resources Institute Finland. Furthermore, Germany, in the White Paper, estimates an exacerbation of hostilities affecting the international security, due to the depletion of natural resources and accelerated population growth. In addition, climate change in combination with these two factors affects water access to people and amplifies the deficit of basic resources, emerging into real threats for states. Similarly, Italy in the White Paper highlights the fact that the scarcity of natural resources can lead to tensions and armed conflicts. Also, in the content of this document it is mentioned the necessity

of trade in primary natural resources necessary for the economic development of the countries. In the same vein, Romania emphasizes that the intense and unsustainable exploitation of natural resources, followed by the slow restoration of certain renewable resources, can even lead to military conflicts. Also, the correct and responsible exploitation of natural resources represents a direction of action related to the environmental security. In the national security strategies of Austria, Denmark, the Czech Republic and Lithuania there is only one mention of the phrase natural resources. In Austria's national security strategy, more specifically in the chapter on security values, interests and objectives, it is mentioned that all citizens must benefit from equal opportunities and support the sustainable conservation of natural resources. Incidentally, among the challenges, risks and threats to Austria's and the EU's security are generated by the lack of resources (energy, water, food). In contrast, Denmark, in the context of climate change, makes huge efforts for the conservations of the limited natural resources in order to avoid the tensions that might emerge in the environmental security and gets involved, alongside the EU, in strengthening resilience and security of the supply of natural resources and limited raw materials in situations where global competition increases. The Czech Republic highlights the competition for access to energy sources and raw materials due to the increased dependence on available natural resources and underlines the importance of protecting critical infrastructures, especially those intended for the transport of strategic raw materials. Lithuania's strategy specifies several stand-alone goals to be pursued to strengthen the resilience of the society and states. Therefore, one of these objectives consists in the application of projects on climate change adaptation for the management of crises and emergency situations caused by migration and conflicts over natural resources.

Research hypothesis  $H_1$  is confirmed by the number of 43 mentions of the phrase natural resources in the 15 analyzed national security strategies out of 23, which represents more than 65% and is reinforced by the main types of natural resources identified in the analyzed documents: energy resources, water, and food. Figure 2 shows the percentage of their posting in the strategy plans, namely 100% for energy resources (15 strategy plans), 87% for water (13 strategy plans), and 73% for food (11 strategy plans). Moreover, natural resources and the three types stated previously are categorized in several security strategy plans as strategic resources (Czech Republic, Denmark, Hungary, Slovakia, Slovenia), vital resources (Austria, Bulgaria, Finland, Italy, Romania), rare resources (Portugal) or basic resources (Germany). Therefore, these results confirm the study of Schellens & Gisladottir (2018) that natural resources are strategic resources from the perspective of national defense.





**Figure 2. The main types of natural resources identified (data processed by the authors)**

Next, the shortage of natural resources is mentioned directly in two-thirds of the national security strategies of the analyzed countries (Table 2). Indirectly, other countries, such as Croatia and the Czech Republic, emphasize that the dependence on certain natural resources can represent a threat to environmental security, France presents the looting of natural resources as a major problem for the national territory and for the entire European Union, Finland encourages the use of renewable natural resources and Lithuania focuses on crisis management in case of conflicts over natural resources. Also, in this table are illustrated the most used key terms in the context of natural resources. At the same time, most countries approach the limited natural resources and the three specified types (energy, water, food) in association with the climate change. Overall, climate change affects social well-being, population health, and critical infrastructures. As a result, restricted access to these resources represents real threats from the perspective of national security strategies (Austria, Czech Republic, Germany) and can generate global and strategic competitions (Denmark, France), international tensions (Bulgaria), conflicts (Lithuania, Hungary, Slovakia), or armed conflicts (Italy, Portugal, Romania). The depletion of the world's natural resources is an issue of global concern and is not limited only to the EU member states. This situation refers to trade in and transports of natural resources, foreign investments, suppliers, transit countries, financial resources, etc. Also, the dependence on a single supplier or exporting country of natural resources can bring significant revenues to support defense spending or even pre-conflict spending, as confirmed by Russia's invasion of Ukraine.

**Table 2. The key terms from strategies that appear in the context of natural resources**

Country	Energy	Water	Food	Scarcity	Climate change	Conflict
Austria	☐	☐	☐	☐	☐	-
Bulgaria	☐	☐	-	☐	☐	☐

Country	Energy	Water	Food	Scarcity	Climate change	Conflict
Croatia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-		-
					<input type="checkbox"/>	
					<input type="checkbox"/>	
Czech R.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-		<input type="checkbox"/>
					-	
					<input type="checkbox"/>	
Denmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
					<input type="checkbox"/>	
					<input type="checkbox"/>	
Finland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-		-
					<input type="checkbox"/>	
					<input type="checkbox"/>	
France	<input type="checkbox"/>	-	-	-		<input type="checkbox"/>
					<input type="checkbox"/>	
					<input type="checkbox"/>	
Germany	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>		<input type="checkbox"/>
					<input type="checkbox"/>	
					<input type="checkbox"/>	
Hungary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
					<input type="checkbox"/>	
					<input type="checkbox"/>	
Italy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
					<input type="checkbox"/>	
					<input type="checkbox"/>	
Lithuania	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-		<input type="checkbox"/>
					<input type="checkbox"/>	

Country	Energy	Water	Food	Scarcity	Climate change	Conflict
					<input type="checkbox"/>	
Portugal	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	
					<input type="checkbox"/>	
Romania	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	
					<input type="checkbox"/>	
Slovakia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	
					<input type="checkbox"/>	
Slovenia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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The results that were presented previously also confirm the second research hypothesis. Almost all the analyzed states have taken into account that the scarcity of the world's natural resources and climate change is an issue of global concern that can generate global and strategic competition, leading to crises, rivalries between countries, and various conflicts that threaten to undermine international peace and security.

## Conclusions

Natural resources continue to be a subject of great interest, from the individual level to the global level. The population, communities of people, and states benefits engage a complex and dynamic system that requires efficient exploitation technologies, investments, critical infrastructures, and, last but not least, specialists in the field. Following the literature review, the research's main limitation was the lack of a solid and comprehensive base of articles specific to natural resources from the perspective of national security strategies. Therefore, this limitation of contribution to the further development of this approach. The analysis of the 15 national security strategies confirms the elements highlighted in the literature review and highlights their position in relation to economic growth, sustainable development, climate change, new technologies, and national security. Also, in most strategies analyzed, natural resources are considered strategic and human, technological, and financial resources. In this study, along with the analysis of the phrase natural resources in the context of national security strategies, the most relevant types of natural resources were analyzed: energy, water, and food. In this context, countries have taken different views as regards the prioritization of one of the three types of natural resources, but overall, energy security, food security, and protection of water resources are important components for national

security. This aspect confirms the study of Mara et al. (2022) in which it is mentioned that the national security strategies and existing national security indices do not prioritize energy security. At the same time, analyzing the scarcity of natural resources is a problem presented in most national security strategies, in accordance with climate change and with possible retaliatory violence or armed conflicts. This paper also validates the existing situation regarding the EU's dependence on natural resources in other countries and confirms recent studies (Baqae et al., 2022; Di Bella et al., 2022) showing dependence on Russia for oil and natural gas, varying from country to country. Future studies have the possibility to analyze, on the one hand, the strategies of other countries outside the EU and on the other hand to carry out more comparative studies. Thus, there is the opportunity to continue the approach by analyzing the effects of Ukraine's conflict on the member states' natural resources.

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