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Strategic management and considerations for the use of Ukraine's natural resources in conditions of war and opportunities for peace: obstacles and risks

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Abstract

The large-scale war in Ukraine, caused by Russia's full-scale invasion in February 2022, has generated unusual consequences for Ukraine and for the world order. In this context, the overall objective of this research is to analyze the objective and subjective conditions that determine the Strategic Management of Ukraine's natural resources in the current war context, evaluating in the process geostrategic considerations and opportunities for sustainable peace, to project future scenarios that identify risks, obstacles and enabling factors in the process of national reconstruction. Methodologically, we worked with a design

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of critical observation of documentary sources, which were selected under the criterion of their recognized academic value. It is concluded that environmental and natural resource governance has the potential to facilitate peace-building processes in post-conflict contexts through three key mechanisms: promoting contact between opposing parties; fostering interdependence; and developing institutional capacity for conflict management.

Keywords: strategic management, natural resources, environmental law, sustainable development, legal framework.

Gestión estratégica y consideraciones para el uso de los recursos naturales de Ucrania en las condiciones de guerra y oportunidades para la paz: obstáculos y riesgos

Resumen

La guerra en Ucrania, ocasionada por la invasión a gran escala de Rusia, en febrero de 2022, ha generado consecuencias inusitadas para Ucrania en particular y para el orden mundial en su conjunto. En este contexto, el objetivo general de esta investigación consiste en analizar las condiciones objetivas y subjetivas que determinan la Gestión Estratégica de los recursos naturales de Ucrania, en el contexto bélico actual, evaluando en el proceso las consideraciones geoestratégicas y oportunidades para una paz sostenible, con el fin de proyectar escenarios futuros que identifiquen riesgos, obstáculos y factores habilitantes en el proceso de reconstrucción nacional. Metodológicamente, se trabajó con un diseño de observación crítica de fuentes documentales, las cuales fueron seleccionadas bajo el criterio de su reconocido valor académico. Se concluye que, la gobernanza ambiental y de recursos naturales tiene el potencial de facilitar procesos de construcción de paz en contextos postconflicto a través de tres mecanismos clave: promoviendo contacto entre partes enfrentadas; fomentando la interdependencia, y desarrollando la capacidad institucional para la gestión de conflictos.

Palabras clave: gestión estratégica, recursos naturales, derecho ambiental, desarrollo sostenible, marco legal.

Introduction

The conflict between Russia and Ukraine has complex historical roots that culminated in the full-scale invasion of Ukraine that began on February 24, 2022, which represents the largest armed conflict in Europe since World War II. Tensions between the two nations have escalated significantly since 2014 with Russia's annexation of Crimea and the subsequent war in the Donbas region (BBC News Mundo, 2022).

In this context, Putin justified the invasion by citing "the protection of Russian-speaking populations" and the alleged "denazification" of Ukraine. However, according to Kuzio's (2022) research, Moscow's real plan included overthrowing the Ukrainian government, establishing occupation regimes, and eventually annexing more territories. This conflict has caused a complex humanitarian crisis characterized by numerous military and civilian casualties, generating an unprecedented refugee crisis in Europe with more than 8 million internally displaced people and another 8.2 million who have fled the country, creating a scenario of geopolitical instability that has altered the regional and global balance of power (ACLED Armed Conflict Location & Event Data, 2024).

As in any geopolitical phenomenon, the Russian invasion cannot be understood without considering the geostrategic value of Ukraine's abundant natural resources, particularly its deposits of rare earths and critical minerals, estimated at approximately \$15 trillion (Theise, 2023). In fact, studies by the United States Geological Survey and the State Geological Survey of Ukraine (cited by Kloepfel, 2025), reveal that more than 70% of these deposits are

concentrated in the regions of Donetsk, Luhansk and Dnipropetrovsk, precisely the areas most affected by the conflict.

The strategic importance of these resources transcends the economic sphere to become a determining geopolitical factor, especially considering that China controls more than 60% of global rare earth production and Russia is another important supplier. The Russian occupation has resulted in a 60% drop in Ukrainian metallurgical exports, plummeting to less than \$3 billion in 2022, while Ukrainian and European mining companies have been stripped of their properties in occupied territories (Theise, 2023). This complex situation reflects not only a territorial conflict but also a struggle for the control of strategic resources for high-tech industries and energy transition.

Image 1. “Most of Ukraine's coal reserves are found in the eastern Donetsk and Luhansk regions”



Source: (Theise, 2023).

The general objective of this research is to analyze the objective and subjective conditions that determine the Strategic Management of Ukraine's

natural resources in the current war context, evaluating in the process geostrategic considerations and opportunities for sustainable peace, to project future scenarios that identify risks, obstacles and enabling factors in the process of national reconstruction.

Three key questions are derived from this objective that reach partial, not definitive, answers in this research: How are Ukrainian strategic resources currently being managed in areas controlled by the Ukrainian government and what are the main vulnerabilities of the system? What geostrategic implications does the protection or loss of Ukrainian natural resources have for the regional and global balance of power? and What governance mechanisms are could natural resources be implemented to facilitate a transition to peace without compromising Ukrainian sovereignty and territorial integrity? These questions guide a comprehensive analysis that, according to Diamond (2007), requires a comprehensive vision that integrates political, economic, and environmental dimensions in situations of armed conflict.

In the words of Liu et al. (2023), Strategic Management of natural resources is understood as the set of policies, procedures, and practices designed to optimize the sustainable use of natural assets, considering long-term time horizons and uncertainty factors in complex environments. In conflict contexts, this management takes on additional dimensions related to national security, territorial integrity, and the preservation of critical assets for post-conflict reconstruction. For authors such as Cebotari and Budurina-Goreacii (2021), the relationship between resource management and geostrategic considerations is bidirectional, since: on the one hand, control of resources influences the

bargaining power and relative power of the actors in conflict; on the other, geopolitical dynamics determine who can access and exploit resources.

The practical utility of this research lies in its theoretical potential to inform public policies and development strategies in Ukraine during and after the conflict, contributing to the formulation of a natural resource governance framework that is resilient, inclusive, and oriented towards sustainable development. As Le Billon, Lujala, and Rustad (2021) rightly argue, natural resource-based post-conflict reconstruction can catalyze economic growth, but also exacerbate inequalities and generate new dialectical tensions if equitable distribution and community participation mechanisms are not implemented. To fully understand these complex issues, the researcher must position himself at the intersection of multiple lines of research, including areas such as: political economy of conflicts, international security studies, environmental governance, international resource law and sustainable development.

This article is structured in four main sections that follow this introduction. In the first section, the theoretical bases that underpin the analysis are presented, examining the conceptual models of natural resource governance in conflict zones and theories on the relationship between natural resources and power dynamics in the international system. The second section details the methodology used, which combines documentary analysis and scenario modeling to understand the dynamics involving natural resources in contexts of high uncertainty. The third section presents the analysis and discussion of the results, organized according to the three research questions posed, contrasting the current situation with potential future scenarios. Finally, specific conclusions

and recommendations are offered to the various actors involved in the management of Ukrainian resources.

1. Theoretical and conceptual bases for the strategic management of natural resources in Ukraine

Overall, Ukraine possesses extraordinary economic and geopolitical potential thanks to its abundant natural resources, including approximately 1.2 trillion cubic meters of proven natural gas reserves (possibly as much as 5.4 trillion), 37 billion tons of coal, significant rare earth deposits, and vast tracts of agricultural land considered among the most fertile in the world (Kloepfel, 2025).

In fact, the currently disputed Dnieper-Donetsk region is home to 80% of the country's conventional oil, gas, and coal production and reserves, while rare metal formations are mainly concentrated in the Donetsk, Doba, and Kurta Balka regions (McLeod, 2022). In geopolitical terms, control of these resources represents a significant factor in the current conflict, as Russia has taken control of approximately two-thirds of Ukraine's maritime area and an estimated 80% of its oil and natural gas deposits in the Black Sea, thus profoundly altering the country's energy and economic prospects (Theise, 2023).

In this order of ideas, it should be clarified that, in order to analyze the strategic management of natural resources in war contexts, due to their heuristic potential, three theoretical frameworks are particularly relevant: the theory of the "resource curse", the environmental peacebuilding approach and the strategic theory based on ends, modes and means. In a synthesis view, the theory of the "resource curse" examines the paradox that historically countries with an

abundance of natural resources often experience lower economic growth and poorer development outcomes than countries with fewer resources, a phenomenon that is especially acute during armed conflicts in the Global South.

For its part, the environmental peacebuilding approach proposes that natural resources, although often catalysts for conflict, can become, under certain geopolitical conditions, tools for peacebuilding through the cooperative and equitable management of natural resources (McLeod, 2022). Strategic theory, developed primarily in military contexts, provides a cognitive framework for the formulation of coherent strategies that articulate objectives, concepts, and resources within acceptable risk limits to create more favorable outcomes, particularly applicable to resource management in complex situations such as twenty-first century armed conflicts.

The "resource curse" theory provides an interesting perspective for understanding the challenges Ukraine faces in managing its natural resources during the current conflict. According to Akylbekova (2022), this theory, initially formulated by Richard Auty in 1993 and developed by Sachs and Warner in 1995, suggests that countries with an abundance of natural resources often face difficulties in translating that wealth into sustainable economic development and political stability, as evidenced, for example, by the case of Venezuela.

In the Ukrainian context, this theory helps partly explain how the abundance of energy, mineral, and agricultural resources, instead of being a comparative advantage, can constitute a factor of vulnerability by attracting external interventions and promoting disputes for territorial control of strategic resources. Logically, the contemporary application of this theory has shifted to

the analysis of why some countries rich in natural resources succeed, while others fail, a question that is particularly relevant to assess what institutional and political structures Ukraine would need to avoid this "curse" during its eventual post-war reconstruction.

In this common thread, the environmental peacebuilding approach offers a promising framework for the strategic management of Ukraine's natural resources in the context of its quest for conflict resolution. In the words of Matthew, Brown, and Jensen (2009), this theoretical perspective recognizes that environmental factors are rarely the sole cause of violent conflict, but can be involved in all phases of the conflict cycle, from contributing to the outbreak and perpetuation of violence, to undermining the prospects for peace in each region of the world.

Thinking about the Ukrainian case, everything indicates that conflicts associated with natural resources are twice as likely to relapse into violence in the first five years, however, less than a quarter of peace negotiations address natural resource management mechanisms (Matthew et al., 2009). Therefore, the assessment of the implications on natural resources and the environment in peacebuilding processes is not optional but a national security imperative for Ukraine, providing opportunities for economic cooperation, job creation and shared management of resources that could contribute to the transformation of the conflict in Eastern Europe.

Finally, strategic theory, developed extensively in military contexts but applicable to resource management, provides a valuable conceptual model when it comes to articulating the challenges facing Ukraine. According to Yarger (2006), this theory conceives strategy as the calculation of objectives, concepts,

and resources within acceptable limits of risk to create more favorable political outcomes, emphasizing in the process that strategy must be integral to influencing and shaping the future environment rather than simply reacting to it.

Undoubtedly, applied to the management of natural resources in the context of the Ukrainian war, this theory emphasizes the need to develop a proactive and prospective view that always considers the dominant political purpose of the survival of the Ukrainian nation state, articulated in policies that express the desired final state. The theory recognizes that strategy confronts adversaries, allies, and other actors, and addresses resource and organizational issues, accepting that some structural factors will inevitably remain out of control or unforeseen, which is particularly relevant in the volatile context of the war in Ukraine.

Table 1. Main theories on strategic management of natural resources.

Theories	Strategic management core ideas	Conditions of war	Natural resources	Obstacles and risks
Curse of resources	Transparent management and economic diversification to avoid excessive dependence on resources.	It intensifies the struggle for control of resources and can prolong conflicts.	Paradoxically, their abundance can become an obstacle to sustainable development.	Corruption, weak institutions, unequal distribution of benefits, external intervention.
Environmental peacebuilding	Integrating Resource Management into Peace and Reconstruction Processes.	Opportunity to transform resources from a cause of conflict or a tool for peace.	Potential to contribute to peace through management cooperation and shared benefits.	High risk of relapse into conflict if resource issues are not addressed in peace agreements.

Strategic theory	Coherent articulation of objectives, concepts and resources within acceptable risk limits.	Need for constant adaptation to changing objective and subjective conditions and high uncertainty.	Seen as elements of power that must be proactively managed.	Difficulty in maintaining strategic coherence in highly volatile and complex environments.
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Source: prepared by the authors (2025).

The comparative analysis of these three theoretical perspectives reveals complementary patterns to approach the strategic management of Ukraine's natural resources, in the current war context. The "resource curse" theory emphasizes the institutional and economic risks inherent in the abundance of natural resources, while the environmental peacebuilding approach highlights the transformative potential of these same resources when effectively integrated into international conflict resolution processes.

Strategic theory complements these models by providing a methodological framework for the formulation of coherent strategies in complex and volatile environments. All three theories agree on the critical importance of institutions and governance in determining outcomes but differ in their emphasis in some respects: the "resource curse" theory focuses on avoiding negative outcomes, environmental peacebuilding on generating positive outcomes, and strategic theory on the decision-making process that connects means to desired ends. This comparison suggests that effective strategic management of Ukraine's natural resources would require an integrated approach that incorporates elements of all three theoretical perspectives, while simultaneously addressing institutional risks, opportunities for international cooperation for peace, and the need for continuous strategic adaptation to the changing dynamics of war.

2. Methodology

According to the American Educational Research Association (2025), the critical and hermeneutical analysis of documentary sources is a methodology that combines the rigorous reading of texts with the in-depth interpretation of their content, context, and meaning. Therefore, this methodology makes it possible to identify the authenticity and credibility of the sources and, at the same time, to understand the relationships between the ideas expressed in the documents and the historical, social and political contexts in which they were produced.

It should be clarified that critical analysis evaluates criteria such as authenticity, representativeness, and meaning to ensure that the sources are reliable and relevant to the objectives of the research. On the other hand, hermeneutical analysis, based on authors such as Gadamer and Ricoeur, focuses, according to Tomkins and Eatough (2017), on interpreting texts within the "hermeneutical circle", a cognitive space where the meaning of a part is only understood through the whole and vice versa.

The selection of sources for this research was based on strict criteria that ensure their academic value and thematic relevance. First, priority was given to open access scientific articles published in peer-reviewed journals, ensuring their quality and availability to a wide audience. Second, documents were selected that specifically address issues related to the strategic management of natural resources, armed conflicts, and peace processes. Finally, studies that offer interdisciplinary perspectives were included, integrating economic, legal, political and environmental perspectives and approaches. This criterion ensured a consistent documentary basis for analyzing the objective and subjective

conditions that determine the strategic management of natural resources in Ukraine in the theater of war.

Table 2. Methodological stages of the research.

Stage	Description	Scope
Problem formulation	Identification of the overall objective and key questions of the research.	Define the initial conceptual framework.
Document review	Selection and preliminary analysis of relevant documentary sources.	Construction of the theoretical-documentary corpus.
Critical analysis	Evaluation of authenticity, credibility and relevance of documentary sources.	Ensures the validity of selected sources.
Hermeneutical interpretation	Contextual and intertextual analysis to understand the deep meanings in documents.	Relate texts to their historical and social contexts.
Interpretative synthesis	Integration of findings to answer the research questions posed.	Generation of conclusions consistent with the general objective of the study.

Source: prepared by the authors (2025).

In its specific sense, Table 2 reflects a structured methodological process that ranges from the initial formulation of the problem to the interpretative synthesis of the findings. This procedure allowed to address the general objective of the research: to analyze the conditions that influence the strategic

management of natural resources in Ukraine during the current war, assessing risks and opportunities for sustainable peace. Each stage contributes to this goal by ensuring that sources are reliable, analysis is rigorous, and interpretations are contextualized.

In accordance with Gallego's (2023) ideas, critical thinking and hermeneutical understanding were key tools for analyzing and interpreting all the information collected throughout the research process. Critical thinking made it possible to subjectively and objectively evaluate documentary sources, identifying potential biases or inconsistencies in their content. Hermeneutics, on the other hand, facilitated a deeper understanding by placing each text within its historical-social context to interrelate it with other relevant documents. The relational approach that is at the same time textual, contextual and intertextual ensures a rich and coherent interpretation that adequately responds to the intrinsic complexities of the subject under investigation.

3. Analysis and discussion of results

Currently, the management of strategic resources in areas controlled by the Ukrainian government is facing significant challenges due to the impact of the armed conflict. While the Kiev government has implemented strategies to protect key sectors, such as agriculture and mining, critical infrastructure has been severely damaged, limiting the capacity to extract and process natural resources. According to UNHCR The UN Refugee Agency (2025), 20% of Ukrainian territory remains occupied by Russian forces, affecting resource-rich regions such as Donetsk and Luhansk. Likewise, the lack of access to advanced technologies and external financing complicates the efficient exploitation of

available resources. In this context, the main vulnerabilities identified include systemic corruption, institutional weakness and insecurity in areas close to the front lines.

Image 2. Ukrainian territories affected by the war.



Source: (BBC News, 2025).

As is normal in these situations, the war has also exacerbated pre-existing problems in the governance of natural resources, such as the lack of transparency

in their management and the limited citizen participation in decisions related to their exploitation. In fact, according to Leal et al., (2024), environmental damage caused by military activities has significantly reduced access to resources such as clean water and fertile agricultural land. These constraints affect the economic sustainability of the country, while also aggravating humanitarian conditions for millions of internally displaced people and local communities dependent on these resources. Therefore, the effective reconstruction of Ukraine will require addressing these vulnerabilities through structural reforms that strengthen the institutions tasked with managing the country's strategic resources.

The protection or loss of Ukrainian natural resources has profound geostrategic implications for the regional and global balance of power. Much more so, Ukraine is a key player in the supply of critical raw materials such as rare earths, essential for advanced technologies and renewable energies. According to Cebotari and Budurina-Goreacii (2021), Russian control over these resources could consolidate its geopolitical influence by monopolizing strategic supply chains, while their loss would weaken its position vis-à-vis the West. On the other hand, ensuring that Ukraine maintains control over its resources strengthens its sovereignty and, simultaneously, increases its ability to withstand external pressures, while strengthening European energy security.

In this context, governance mechanisms must prioritize both environmental sustainability and equity in the distribution of benefits derived from natural resources. According to a report by the United Nations Development Programme (UNDP), transparent and participatory management can reduce social tensions and promote political stability in post-conflict contexts (United Nations, 2013). For Ukraine, this could include decentralized systems that allow local

communities to participate in key decisions about resource use, as well as realistic legal frameworks that ensure a fair distribution of income among conflict-affected regions.

Additionally, international agreements could be implemented that protect Ukraine's sovereign rights over its natural resources while promoting responsible foreign investment. Taken together, these agreements must align with international standards such as the United Nations Guiding Principles on Business and Human Rights (2011), ensuring that foreign companies operate under strict environmental and social regulations. Moreover, it is also useful to establish independent monitoring mechanisms to prevent corrupt or extractives practices that could undermine efforts to build sustainable peace, especially since:

International human rights obligations require States to respect, protect and fulfil the human rights of persons within their territory and/or jurisdiction. That includes the duty to protect against human rights violations committed by third parties, including corporations. (Naciones Unidas de los Derechos Humanos, 2011, p. 3)

Table 3. Strategic importance of Ukraine's natural resources.

Natural resources	Economic importance
Rare earths	Essential resources for advanced technologies such as batteries, wind turbines, and electronics.
Natural gas	Key to reducing Europe's energy dependence on Russian gas. There are significant reserves in Ukraine.

Agriculture Ukraine is one of the world's largest exporters of grain; vital to achieving global food security.

Source: prepared by the authors (2025).

The chart above (Table 3) highlights how Ukrainian natural resources are not only critical to its domestic economy, but also to broader global interests. Rare earths have a strategic role in the global energy transition, while natural gas can be a key element in diversifying European energy sources. In this framework, Ukrainian agriculture is equally strategic to avoid international food crises, especially in Ukrainian wheat-dependent regions such as the Middle East and North Africa (Kloepfel, 2025).

However, any external attempt to control these resources must be critically analyzed. The declared or implicit intention of the United States or any other foreign power to directly or indirectly appropriate Ukrainian natural resources, as a condition of possibility for reaching peace agreements, raises serious ethical and legal concerns, which cannot be omitted from the analysis of the situation. For these reasons, which are framed in public international law, Leal *et al.*, (2024) categorically argue that any international agreement must fully respect national sovereignty over the natural resources of the belligerent states. This right includes ensuring that all decisions related to their exploitation respond to Ukrainian national interests and not to external agendas alone.

Finally, it is imperative that any negotiated framework respects the guidelines for sustainable development set by Ukrainian and international environmental laws. This includes adhering to principles such as those established in the Aarhus Convention, guaranteeing transparency, public

participation and access to environmental justice in all decisions related to natural resources. The authors of this research are convinced that only through an ethical and socially responsible approach will it be possible to transform these strategic assets into pillars for lasting peace and equitable economic recovery in Ukraine, in accordance with the goals for the achievement of Sustainable Development (Asamblea General de las Naciones Unidas, 2018).

Conclusion and recommendations

From the point of view of the authors of this research, the strategic management of natural resources in Ukraine represents a potential pathway not only for economic recovery, but also for the construction of a lasting peace after the conflict with Russia. As Krampe, Hegazi, and VanDeveer (2021) point out, environmental and natural resource governance has the potential to facilitate peacebuilding processes in post-conflict contexts through three key mechanisms: promoting contact between warring parties, fostering interdependence, and developing institutional capacity for conflict management.

In the case of Ukraine, these mechanisms could be materialized through cross-border initiatives for the management of shared water resources, joint environmental rehabilitation programmes in conflict-torn areas, together with the creation of effective institutional frameworks that ensure an equitable distribution of the benefits derived from natural resources.

The transition from the logic of competition for resources to a perspective of international cooperation represents a paradigmatic shift necessary to overcome the current obstacles and establish the basis for the non-repetition of the war in Ukraine. This approach, known as "environmental peacebuilding," proposes that common environmental challenges can serve as an entry point for broader processes of pacification and social reconstruction.

The authors of this article are of the opinion that resource management in fragile states, such as war-subsumed Ukraine, and cooperation around natural resources can change the "strategic climate," altering the cost-benefit calculus of state actors to make conflict pose greater risk and can also strengthen governance by disseminating new transnational norms that transform society more broadly. These democratizing dynamics could help Ukraine establish resource management mechanisms that promote environmental sustainability on the one hand and serve as platforms for international dialogue and reconciliation on the other.

It is important to remember that, from a legal perspective, the Ukrainian legal framework offers important guarantees for the sustainable management of natural resources, although it currently faces significant challenges due to the war context. As Shandra (2018) explains, Article 50 of the Constitution of Ukraine, together with the Aarhus Convention, protect the right of citizens to access information on environmental issues, stating specifically that such information cannot be totally or partially hidden or inaccessible.

However, since the start of Russia's full-scale invasion in February 2022, access to open environmental data has been limited, mainly due to the need to protect the location of industrial and energy facilities that could become targets

of potential Russian attacks. This restriction, while understandable from a national security perspective, contradicts the principles set out in environmental legislation and prevents citizens from making informed decisions about their health and safety, from fully participating in decision-making processes that will affect the environment, or from accessing justice.

In this regard, an important fact is that the State Open Data Portal of Ukraine, administered by the Ministry of Digital Transformation⁵, established restrictions at the beginning of the war on some datasets, but environmental information was not provided for among these exceptions. However, in practice, managers do not publish open environmental data at their discretion, which constitutes a violation of Articles 3, 4, 9 and 15 of the Aarhus Convention (Convention on access to information, public participation in decision-making and access to justice in environmental matters, 1998).

This situation therefore illustrates the tension between national security imperatives and the principles of transparency and the right to environmental information in times of war. Soon, resolving this tension will be crucial to establishing a legal framework that allows for strategic management of natural resources that supports both security and sustainable development, especially considering that transparency in the management of natural resources is essential to prevent corruption and ensure equitable benefit-sharing, key factors for long-term social and political stability.

Finally, to move towards effective strategic management of Ukrainian natural resources that contributes to peace, policymakers and researchers should:

⁵ Available online in Ukrainian at: <https://data.gov.ua/dataset>

- Develop transparency mechanisms adapted to the context of war that protect sensitive information but ensure citizen access to critical environmental data.
- Incorporate principles of environmental peacebuilding into national reconstruction plans.
- Design inclusive institutional frameworks for resource management.
- Promote international cooperation in environmental restoration.
- Establish transparent monitoring systems to assess the environmental impact of military operations.

Overall, we think that these general measures would allow Ukraine not only to protect its natural heritage during the conflict, but also, and most importantly, to use resource management as a tool for sustainable peacebuilding and as a solid basis for driving sustainable economic development that benefits all sectors of society, without distinctions.

References

- American Educational Research Association. (02 de marzo de 2025). *An Introduction to Documentary Research*. <https://www.aera.net/SIG013/Research-Connections/Introduction-to-Documentary-Research>
- ACLED (Armed Conflict Location & Event Data). (12 de march de 2024). *Ukraine Conflict Monitor*. <https://acleddata.com/ukraine-conflict-monitor/>
- Akylbekova, D. (2022). *Analyzing the Resource Curse theory: A comparative study of Kazakhstan and Norway*. Lund: Lund Univresity.
- Asamblea General de las Naciones Unidas. (2018). *La Agenda 2030 y los Objetivos de Desarrollo Sostenible Una oportunidad para América Latina y el Caribe*. Santiago de Chile: Cepal.

BBC News. (13 de march de 2025). *Ukraine in maps: Tracking the war with Russia*. <https://www.bbc.com/news/world-europe-60506682>

BBC News Mundo. (26 de febrero de 2022). *Rusia y Ucrania: qué pasó en Crimea en 2014 (y por qué importa ahora)*. <https://www.bbc.com/mundo/noticias-internacional-60500020>

Cebotari, S., & Budurina-Goreacii, C. (2021). Geostrategy: Theoretical Conceptual. *Compartmentul*, 94 (01), 10-23. [https://doi.org/10.52388/1812-2566.2021.3\(94\).01](https://doi.org/10.52388/1812-2566.2021.3(94).01).

Convention on access to information, public participation in decision-making and access to justice in environmental matters. (25 de june de 1998). *UNECE*. <https://unece.org/DAM/env/pp/documents/cep43e.pdf>

Diamond, J. (2007). *Colapso Por que unas sociedades perduran y otras desaparecen*. Bogotá: DeBolsillo.

Gallego, R. (2023). Pensamiento crítico en la era digital: Desafíos y oportunidades para una epistemología digital. *Revista Entropia Educativa*, 1 (1), 31-39. <https://portal.amelica.org/ameli/journal/849/8494965009/8494965009.pdf>.

Kloepfel, M. (12 de march de 2025). *Ukraine's Rare Earth Metals: A Hidden Economic Powerhouse*. <https://www.linkedin.com/pulse/ukraines-rare-earth-metals-hidden-economic-powerhouse-marc-kloepfel-weksc>

Krampe, F., Hegazi, F., & VanDeveer, S. D. (2021). Sustaining peace through better resource governance: Three potential mechanisms for environmental peacebuilding. *World Development*, (144), 1-10. <http://dx.doi.org/10.1016/j.worlddev.2021.105508>.

Kuzio, T. (2022). Why Russia Invaded Ukraine. *HorizonS*, (21), 40-50. <https://www.cirsd.org/files/000/000/009/83/07c4011b79675bf82057e13d0f8669ff60d67441.pdf>.

Le Billon, P., Lujala, P., & Rustad, S. A. (2021). Transparency in Environmental and Resource Governance: Theories of Change for the EITI. *Global Environmental Politics*, 21 (3), 124-146. https://doi.org/10.1162/glep_a_00610.

Leal, W., Pires, J., Fedoruk, M., & Lisovska, T. (2024). War in Ukraine: an overview of environmental impacts and consequences for human health. *Frontiers*, 18, 1-14. <https://doi.org/10.3389/fsrma.2024.1423444>.

- Liu, Y., Khan, A. J., Iqbal, J., Ul Hameed, W., & Ahmed, T. (2023). Strategic management of natural resources through human, technological, and institutional resources: Sustainable curing the resource curse. *Resources Policy*, 83 (A). <https://doi.org/10.1016/j.resourpol.2023.104233>.
- Matthew, R., Brown, O., & Jensen, D. (15 de abril de 2009). *From Conflict to Peacebuilding: The role of natural resources and the environment*. Obtenido de International Institute for Sustainable Development.: <https://www.iisd.org/publications/conflict-peacebuilding-role-natural-resources-and-environment>
- McLeod, J. (08 de november de 2022). *Geological Resources of Ukraine*. Conference: Tulsa Geological Society Special Presentation: https://www.researchgate.net/publication/375766275_Geological_Resources_of_Ukraine
- Naciones Unidas de los Derechos Humanos. (16 de june de 2011). *Principios rectores sobre las empresas y los derechos humanos*. https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_sp.pdf
- Shandra, R. (2018). Constitutional and Legal History Works of Ukrainian Scholars in 2000–2015. *Krakovskie Studia z Historii Państwa i Prawa*, 11 (01), s. 67–94. doi:10.4467/20844131KS.18.004.8964.
- Theise, E. (28 de august de 2023). *Russia plundering Ukraine's natural resources*. <https://www.dw.com/en/russia-ukraine-war-natural-resources-grain/a-66639269>
- Tomkins, L., & Eatough, V. (2017). *Hermeneutics: interpretation, understanding and sense-making*. London. <https://eprints.bbk.ac.uk/id/eprint/16385/3/16385.pdf>: Cassell, C. and Cunliffe, A. and Grandy, G. (eds.) The SAGE Handbook of Qualitative Business and Management Research Methods.
- UNHCR The UN Refugee Agency. (12 de march de 2025). *Ukraine Multi-year Strategy 2025-2027*. <https://reporting.unhcr.org/sites/default/files/2025-01/Ukraine%20-%20Strategy%202025.pdf>
- United Nations. (13 de January de 2013). *Natural Resource Management in Transition Settings*. https://unsdg.un.org/sites/default/files/UNDG-ECHA_NRM_guidance_Jan2013.pdf

Yarger, H. R. (15 de february de 2006). *Strategic Theory for the 21st Century: The Little Book on Big Strategy*.
<https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=1722&context=monographs>

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