

ECOLOGICAL SECURITY IN THE BROADER CONTEXT LEVEL OF GLOBAL PROCESSES

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A scientific critique

Abstract: *Environmental destruction is undoubtedly becoming a challenging issue for current and future global processes. Based on the analytical approach in the field of science and scientific disciplines that are correlated with environmental safety, it can be seen that this problem is fateful for the future of civilization.*

Knowledge of causes of endangerment and the cause-and-effect relationship with the consequences have so far indicated the spread and strengthening of environmental crises, but recent events in natural and socio-humanistic environment significantly indicate an increase in these crises. This alarmingly point to the need for reaction from individuals as well as institutions, organizations and associations at various levels. The logarithmic increase in environmental degradation indicates the need to increase environmental awareness in many convergent directions emphasizing the need for an ecological culture of valuation.

Factors that deepen the environmental crisis are determined through the evaluation of the current state of environmental safety and design for the future. Establishing the factors that most cause negative environmental tendencies indicates the need to direct different activities in order to reduce them to an optimal extent. Controversies, paradoxes, discourses in this area indicate the need to provide scientific and professional opinions. The paper aims to explain how intensified the interactions of individual causes that directly and indirectly affect environmental security at the global, regional and local levels.

Key words: *environmental safety, environmental degradation*

1. INTRODUCTION

At the end of the 20th century, warnings about air pollution, soil pollution, global climate change, pollution of water resources and the disappearance of certain plant and animal species began to appear rapidly in the scientific and professional fields and the general public. The reached level of scientific knowledge allows, with sufficient precision, that the fashion industry emits 10% of CO₂ in relation to the total emission of CO₂ into the atmosphere, and that by the year 2050 it is predicted that there will be more plastic in seawater than fish, that climate change is the cause of many social problems.

Also, as a preventive and reactive effect, there are also attempts to protect the environment with different measures and activities and technical-technological and digital innovations of the modern era, so vacuum cleaners for CO₂ from air and water (direct "capture" of CO₂ from the air - efficiency 90%, and a CO₂ vacuum cleaner from the ocean floor), drones in Spain and India that selectively scatter tree seeds via "seedcopters", the existence of an interactive platform to show places where waste is collected, selected and recycled, making packaging/bioplastics from seaweed, etc...

There is no doubt that in the field of environmental security, a significant number of contents are observed that have a causal effect on global social processes and destroy old security paradigms.

2. IMPLICATIONS OF THREATENING ENVIRONMENTAL SECURITY

It is evident that cause-and-effect relationships in maintaining the stability of ecological security are increasingly interactive. Also, the more the pressure on the living environment continues, the negative impacts grow logarithmically and multiply their impact, which ultimately produces negative consequences. Liberalization, expansion of urban areas, felling of forests, pollution of sea surfaces, mining of mineral wealth, destruction of biodiversity, etc. there are only some segments that indirectly and directly affect environmental safety.

The establishment of the aforementioned can lead to an elementary division of the causes of the impact on the environment through social, natural and technical-technological segments. Some causes produce ecological crises, and the ways of overcoming them can be determined by solving complex problem contents.

Environmental experts who are oriented towards the social sciences and humanities broaden their view of the causes of the ecological crisis, considering that it is very important to analyze the development of society and civilization in order to discover the specific causes of a specific society and the degree of their development. When considered segmentally, in a social sense, problematic content can be seen through international law, environmental ethics and environmental awareness. The international legal aspect has a wide range of observation, from the conventions of the United Nations to the decisions of local communities, but also the work of non-governmental organizations at the global, regional and world level. In their article "Legal instruments for the protection of the environment" Vuckovic B. and Vuckovic V. (Vuckovic&Vuckovic, 2022:26) point out the importance of the right to the environment - the Aarhus Convention, consideration of the environment in legal regulations, the European Convention for the Protection of Human Rights and Basic freedom, criminal law aspect of environmental protection. Environmental ethics and awareness arise from systemic and institutional activities that are carried out through various sciences and scientific disciplines as well as through cultural and religious understanding, elements of environmental policy, concepts and strategies of sustainable development, quality of the environment as an economic good, environmental management, protection of constituents environment, etc. Viher et al. they think that the political alternatives need to be ranked according to political and economic criteria. Given that, through restriction of the weather modification techniques, we do not see any economic gain, we have decided on the following two main goals: political gain and avoidance of economic damage. (Viher,M., Kljucaric, V., Malenica N., 2019).

Ecological awareness can appear in its latent and manifest form. Interpersonal responsibility is particularly important for solving environmental problems, which enables ecological awareness to manifest itself not as latent, but in its manifest form, which implies adequate practical behavior, because it "is not a passive reflection of the objective state of the human

environment in the minds of people, but is also an effort (necessity) of man to find a way out of the ecological crisis". (Baljak, Erkić, Marković, 2022:199).

The natural causes of threats to ecological safety can be seen through natural disasters, but also the increase in the number of inhabitants in certain parts of the world - due to the increase in production and consumption, etc. The consequences of human activity, which condition the environmental problem, are generally viewed as a technical-technological problem.

Given the interdependence of the causes of ecological crises, problematic contents that convergently affect ecological security can be recognized through:

Climate change

Climate changes are long-term changes in the statistical distribution of climate factors, over a period of ten to a million years. Factors influencing the modern monitoring of climate change emphasize the already mentioned interactivity and can be divided into:

- Internal factors (atmosphere, water environment, ice and snow covers, etc.) and
- External factors (changes in the orbital path of the planet, different changes in the atmosphere, solar radiation, rotation of the planet, etc...).

It is evident and scientifically proven that climate change affects almost all spheres of life on the planet. Accordingly, artificial influences manifested in: increased CO₂ emissions, consumption of fossil fuels, degradation of forest potential, construction of infrastructure, development of urban areas, etc., are specially investigated. Of the above, there is no doubt that the excessive release of CO₂ into the atmosphere has the greatest impact on environmental safety, which was noticed at the end of the last century and at the beginning of this century.

In his article Mr. Bebernes think that humans have pumped so much carbon into the air that climate experts now believe even a dramatic reduction in fossil fuel emissions won't be enough. They say we'll also have to remove some of the carbon that's already in the atmosphere if we want to prevent the worst impacts of climate change. (Bebernes, M., 2022).

The increase in temperature due to climate change is evident. What, unfortunately, is becoming a daily occurrence are extreme and sudden changes in temperature.

The consequences of such developments are ominous for safety and security. The sharp rise in temperatures is likely to have an effect on climate instability and the frequency of extreme events such as storms, hurricanes, and tornados. (Nayef, 2006:106). Summers should get hotter and winters warmer. The hot summer of 2003 in Europe repeated many times with higher temperature. These rising temperatures caused ocean waters to rise. Melting from glaciers, the Arctic, and, eventually, Antarctic ice sheets will also contribute to this phenomenon. This rise in sea level will threaten coastal areas, which will in turn induce many of inhabitants of these zones to move elsewhere.

According to the United Nation's Intergovernmental Panel on Climate Change low-carbon technologies would need to generate 80% of the world's electricity by 2050 (up from about one-third today) in order to limit warming to two degrees Celsius above preindustrial levels.(Azevedo,Davidson, Jenkins, Karplus, Victor, 2020:21).

Ecological migrations

Ecological migration, in fact, represents a type of spatial migration that can be permanent and less often, temporary because people strive for better economic and ecological living conditions. In the sciences and scientific disciplines, forms such as "refugees conditioned by the living environment", "migration due to changes in the living environment" and the like

appear. An increase in temperature, a shortage of drinking water, and natural disasters can lead to an increase in the number of migratory populations. Migrant population as an endangered population is not only a humanitarian problem, but the problem contents appear in: geostrategic and geopolitical implications; this is a high-risk category for getting various types of diseases; cross-border cooperation becomes more complicated; there are always forces in the host country that do not accept environmental migrants; the group is susceptible to recruitment into extremist groups, paramilitary formations, criminal organizations, etc.; they are apostrophized for media manipulation and susceptible to human trafficking.

Luterbacher considers two main changes why migrants would like to go from their land to better areas. These are: 1) Ecological parameters such as climate change and 2) Socio-economic forces with special attention paid to the additional market forces unleashed by market liberalization and globalization. (Luterbacher, 2004:165).

Waste materials

It is evident that individual and collective awareness of the harmfulness of waste has not yet taken root among a large number of the world's inhabitants. For the sake of a systemic solution to the problem of waste, it would be necessary to involve the business side in addition to being aware of the preservation of the environment, i.e. to use technical and technological innovations to process waste into raw materials and materials that can once again be useful in the broader context of sustainable development.

Approximately 2.427 billion tons of waste (safe and dangerous, generated by households and business) were produced in the EU annually 2008 and after a period of decline since 2008, waste production to grow (2016-2.53 billion tons). Consumer behavior in the long run has contributed to increase in waste production (Botlikova, Botlik, 2019:383).

Waste materials leave a direct and indirect impact on the loss of human lives, the disappearance of biological habitats, and a long-term impact on the constituents of the environment because the environment is unable to absorb the impacts (diseases of plants and animals, abandonment of habitats, degradation of fertile soil, etc.).

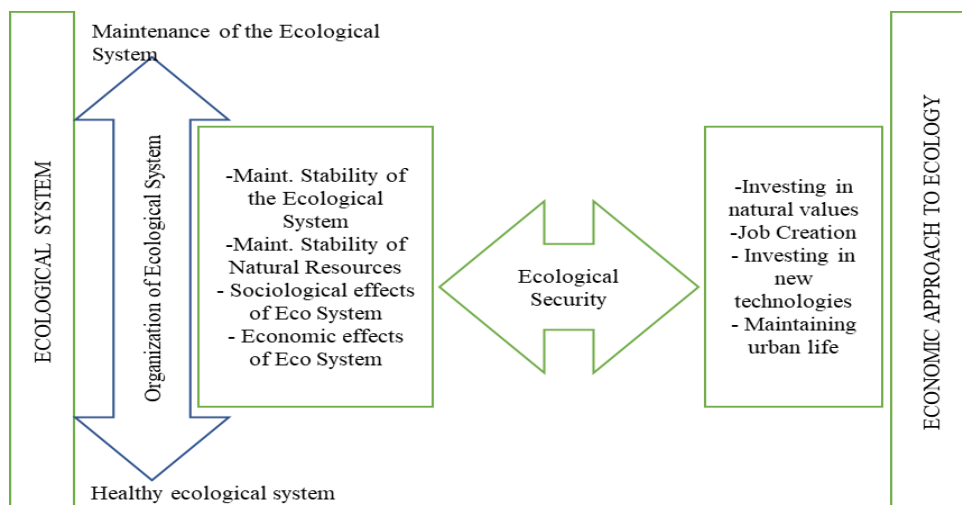
Social conflicts

Due to the confrontation between international entities, the need for a quality living environment is always interdependent with the supply, use and distribution of energy sources. Also, this interaction causes the phenomena of "resource politicization" and "ecological marginalization". The epilogue is very often the degradation of the natural environment due to war conflicts with unforeseeable consequences. The use of modern combat equipment in itself pollutes the environment. Minefields, residual ammunition and weapons, unexploded ordnance, biological and chemical agents significantly pollute the environment. The existence of conflict prevention in international organizations and the focus on stabilizing segments of ecological security after social conflicts significantly mitigate the impact on the natural environment (as an example, one can cite the current conflict in Ukraine, in which the fact of environmental degradation and the disappearance of part of the flora and fauna in the war-affected area is ignored).

Bearing in mind the aforementioned problem contents, which are on the same clause-conditioned plane, it is unequivocal that in the coming period they will reflect on all spheres of socio-economic life, giving a futuristic discourse in the field of security.

3. MULTIDIMENSIONAL ACTIVITIES TO MAINTAIN ENVIRONMENTAL SAFETY

Ecological safety as a catalyst of socio-economic impacts on the ecosystem is shown in Scheme 1. It is evident that ecological safety, in this sense, amortizes impacts that are negative and counterproductive for environmental protection.



Scheme 1. Ecological safety as a catalyst of socio-economic impacts on the ecosystem

Environmental security as a state of protection of the human rights of the individual, the state and society and as a correlative factor in the relationship between nature and society can be viewed multivariately at different levels. Conditionally, the division into factors that reduce the threat of environmental safety from the point of view of organization can be: international entities, states, corporations/firms, business entities and non-governmental organizations, associations and associations. These elements combine forces, activities and means, giving guidelines and directly implementing actions to protect the natural environment. At the strategic level, the "Green Agendas", conferences and summits in different formats that give the tone of the protection of the natural environment can be seen. For example, at the last conference on climate change, global goals were adopted (COP 26 The Glasgow Climate Pact, 2021:5):

- Mitigation: secured near-global net zero, NDCs from 153 countries and future strengthening of mitigation measures Over 90% of world GDP is now covered by net zero commitments. 153 countries put forward new 2030 emissions targets (NDCs). The Glasgow Climate Pact accelerates the drumbeat and puts in place the underpinning rules and systems. In Glasgow, countries agreed to come back next year with new strengthened commitments, a new UN climate programme on mitigation ambition, and they finalised the Paris Rulebook. To deliver on these stretching targets, the Presidency has driven commitments to move away from coal power, halt and reverse deforestation, reduce methane emissions and speed up the switch to electric vehicles.

- Adaptation & Loss and Damage: boosted efforts to deal with climate impacts 80 countries are now covered by either Adaptation Communications or National Adaptation Plans to increase preparedness to climate risks, with 45 submitted over the last year. The Glasgow - Sharm el-Sheikh Work Programme on the Global Goal on Adaptation was agreed, which will drive adaptation action. Record amounts of adaptation finance have been pledged, including committing to doubling 2019 levels of adaptation finance by 2025. This is the first time an

adaptation specific financing goal has ever been agreed globally. Nations have announced new partnerships to improve access to finance, including for Indigenous Peoples. A new Glasgow Dialogue on Loss and Damage funding arrangements was created. The Santiago Network on Loss and Damage was brought to life through clear functions and funding.

- Finance: mobilised billions and trillions Developed countries have made progress towards delivering the \$100 billion climate finance goal and will reach it by 2023 at the latest. 34 countries and five public finance institutions will stop international support for the unabated fossil fuel energy sector next year. Private financial institutions and central banks are moving to realign trillions towards global net zero. In Glasgow, countries agreed the way forward for the new post-2025 climate finance goal. Developed countries committed significantly increased funding to vital funds such as the Least Developed Countries Fund.

- Collaboration: worked together to deliver The Glasgow Breakthroughs will accelerate collaboration between governments, businesses and civil society to deliver on climate goals faster, whilst collaborative councils and dialogues in energy, electric vehicles, shipping and commodities will help deliver on commitments. At COP26, we finalised the Paris Rulebook - agreeing the 'enhanced transparency framework' (common reporting of emissions and support), a new mechanism and standards for international carbon markets, and common timeframes for emissions reductions targets.

Technical and technological achievements have an imperative effect on environmental protection and influence the development of future strategies, policies and procedures. The system of smart cities, irrigation in desert conditions, innovations for renewable energy sources, etc. they can significantly reduce the impacts of climate change, global warming or CO₂ emissions. In the coming period, greater investment in this area is expected in many sciences and scientific disciplines, but also in practical solutions at all levels. For many projects, it will be conditional that they have environmental permits in order to be completed.

In accordance with the above in the area of innovation and summit conclusions, there are also theoretical concepts for solving environmental crises that primarily respect the "multifactorial" approach and are presented through (Vejnovic, Simic, 2014:27):

- Philosophical-anthropological radicalism;
- Changing the socio-economic system;
- Balance maintenance strategy;
- Neoliberal concept of technological optimism;
- The strategy of reflexive rationality;
- The emancipatory role of ecological movements and
- „Realistic“ approach.

Regardless of which approach in solving the problem of ecological security in the world is pretending, it is obvious that the goals from Glasgow will be difficult to achieve. For now, it is imperative to maintain a stable security environment by adopting preventive measures and applying technical and technological solutions.

4. CONCLUSION

In the modern world, environmental protection is seen as a contemporary deviation of the global trajectory of development. Environmental problems come into the spotlight of public opinion every time major disasters with ecological consequences occur in the world. The article was created as a synthesis and result of the study of the interdependence of ecological security and the need for sustainable development of society and environmental protection. It

is a significant international, security and sociological phenomenon - various types and forms of endangerment, injury, pollution or degradation of the environment, i.e. the efforts of states and society to find an effective system of measures aimed at preventing, eliminating and suppressing environmental endangerment phenomena that have a long history tradition, but according to their intensity, frequency, appearance, scope and intensity of implications, they stand out in the second half of the 20th century with enormous technical-technological progress and comprehensive development of society. It is believed that environmental security will be imperative to consider in the future in order to make life on the planet bearable for living beings. In this context, ecological security, as a catalyst of socio-economic impacts on the ecosystem, will not only be seen as the optimal use and protection of nature, but also, from a narrow professional perspective, as the minimization of risk or the probability of feeling the negative implications of environmental changes.

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