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## BIOECONOMIC AND ECOBIOPOLITIC ASPECTS OF THE WARTIME AND POSTWAR RESTORATION OF THE RURAL ECONOMY

Over the past three decades, ecobiopolitics has not only taken center stage on the global agenda, but has also acted as an active driver of the bioeconomy, contributing to the achievement of the Sustainable Development Goals. Most countries of the world have reoriented their rural development policy towards the transition from the traditional model, in which agriculture is positioned as a burden on the economy, to a model in which it acts as an engine of rural development through the tools of bioeconomy, allowing at the first stage to move to a "green" economy, and then – to sustainable inclusive growth.

The rural economy is connected not only with agriculture, food and processing industry, but also with such industries as construction, chemical industry, biotechnological industry, glass, pharmaceutical, mechanical engineering [1–2; 5]. In all these industries, it is necessary to form their own points of growth, because nowadays they are experiencing a large percentage of damage as a result of the full-scale invasion of the Russian Federation into the territory of Ukraine.

Back in December 2015, the European Commission adopted a new package of documents, which were designed in order to help European agribusiness and consumers in making the circular economy stronger, where resources are used more efficiently. This decision should contribute to the "closing the contour" of the economy, it means, closing the life cycles of products due to the deep processing of raw materials and recycling, which will also have a beneficial effect on the environment. The transition to a new type of economy – bioeconomy will be carried out through the instrument of European structural and investment funds, as well as the financial component of the Horizon 2020 program (about 650 million Euros), 5.5 billion Euros from structural funds for the management of secondary raw materials and waste, and investments at national levels [6].

We can assume that food relations between states in the near future may change beyond recognition, not only through the war of Russia against Ukraine, but also as soon as a number of developed countries build an internal non-waste "circular economy", aimed at solving, particularly, the problem of resource depletion [2; 7], what determines the subsequent role of Ukraine in ensuring global food security, for which the issue of the need to unblock commercial seaports is gaining particular urgency.

Since February 24, 2022, the world, and Europe in particular, has been facing an unprecedented number of different challenges that will only increase this year. We are talking about the growing energy, food and financial crisis and at the same time ongoing processes of fighting to prevent climate change, environmental degradation, including the loss of biodiversity, nutrient emissions and soil degradation, measures to financial, economic and trade restrictions of the Russian Federation. The solution of these complex problems, the need to support the restoration of the rural economy of Ukraine, which suffered because of damaging as a result of hostilities, requires a systemic change in our economic model, the penetration of eco-biopolitics into it, primarily into the activities of the National Council for the Resumption of Ukraine from the consequences of the war.

Ecobiopolitics should promote the idea of inclusive growth of the rural economy in order to distribute and preserve the benefits that the globalization of the food system, technological changes and innovations in agriculture bring to the whole society and, in particular, to rural construction institutions [2; 5; 7]. These are just some of the key drivers for reconnecting the construction and rural economies to ensure both private growth and synergy in rural construction. Others, such as the migration of the rural population from the zones of active hostilities (both internal and external), the loss of stability of value chains, also form the bioeconomic constraints of the war and post-war recovery of Ukraine's rural economy. In such a situation, the current economic model has a systemic failure, institutional and regulatory inability is generated to ensure the effective (as far as possible in the new normal) functioning of the rural economy in a state of war and will provide an eco-biopolitical vector for its recovery. This is due to the orientation of the current agrarian and construction policy aimed at counteracting the emergence of crises [3-4] on unlimited resources and their absorption. It understates the capital costs associated with implementing ecobiopolitics into rural and building economy institutions and the importance of natural capital to ensure their long-term viability. This does not create the right incentives for the synchronous movement of the agriculture and construction industries towards the bioeconomy, which now proceeds exclusively within the naturally renewable boundaries of the resources involved. We need to improve eco-biopolitics through its double decoupling – a proportional reduction in investments in resource-saving and environmental projects while ensuring their flow into the recovery process, providing a new architecture for agri-food value chains on the basis of parity between agriculture and construction, denounced as a circular economy and bioeconomic.

At the same time, we must remember that both the bioeconomy and the circular economy do not imply ensuring the sustainable development of the rural economy, it must be created on the principles of ecobiopolitics, in which the Sustainable Development Goals are a red thread along and the need to curb the level of militarization of the Russian Federation. It is an important thing that the production of biobuilding materials does not compete with food production and does not have a negative impact on other ecological processes of the post-war recovery of the rural economy, in particular the sacrifice of biodiversity and climate change protection in the name of large-scale rural construction projects.

At the same time, the circular economy must reduce its dependence on fossil and non-renewable building materials with a high environmental footprint. An integral part of creating synergies is assessing how biomass and biodegradable building materials perform in a circular economy, such as how easy to reuse in agriculture or construction, or, for example, when the possibilities of recycling material in rural construction projects are exhausted. This means that when you plan new biobuilding materials, the possibility of reuse and the need to recycle them in rural construction projects aimed at the post-war recovery of the rural economy and it should be taken into account at the beginning, at the design stage.

Consequently, eco-biopolitics can not only help in the post-war recovery of the rural economy, but also create the effect of integrating the construction and rural industries, which is less dependent on non-renewable resources, includes closed recycling cycles, secondary ones, and pollutes the environment less during implementation of rural construction projects. On the other hand, the circular economy can help make the bioeconomy more resource efficient and restorative in nature. The concepts of the bioeconomy and the circular economy as the interdependence of the construction industry and agriculture clearly reinforce each other and generate synergistic effects. However, they have been developed mostly in parallel, but now they must be strategically combined.

## **References:**

1. Мельников О.В., Петруха С.В., Петруха Н.М. Економічне відновлення сільських територій: співвідношення фундаментального та прикладного аспектів наукового дослідження. *Вчені записки Університету «КРОК»*. 2021. № 1 (61). С. 176–193. DOI: https://doi.org/10.31732/2663-2209-2021-61-176-193.

2. Петруха Н.М., Петруха С.В. Державне регулювання інтегрованих корпоративних об'єднань в умовах структурно-інституціональної та функціональної трансформації сільської економіки: проблеми методології, теорії, соціально-економічної та секторальної політики :

монографія. Київ : ТОВ «Видавничий дім «Професіонал», 2020. 496 с.

3. Про деякі заходи щодо поліпшення фінансового стану аграрного сектору економіки та розвитку тваринництва : указ Президента України від 29.05.2009 № 378/2009. URL: https://zakon.rada.gov.ua/laws/show/378/2009#Text.

4. Про запобігання впливу світової фінансової кризи на розвиток будівельної галузі та житлового будівництва : закон України від 25.12.2008 № 800-VI. URL: https://zakon.rada.gov.ua/laws/show/800-17#Text.

5. Petrukha N. Bioeconomy as a new economic setup. Міжгалузеві наукові дослідження: можливості та варіанти впровадження : збірник наукових праць, м. Ніжин, 09 груд. 2021 р.; Ніжинський агротехнічний інститут НУБІП. Ніжин, 2021. С. 127–129.

6. Petrukha N., Mazur A., Kushneruk O., Stakhova K., Tarasenko M. Digital and Marketing Steps of Social Cluster Development Institutions in Circular Rural Economy Conditions. Циркулярна економіка як основний спосіб господарювання в умовах цифрової трансформації. Трускавець: ПОСВІТ, 2021. С. 57–85.

7. Petrukha S.V., Petrukha N.M., Hudenko O.D., Alekseienko N.M., Bondarenko D.V. Sectoral Shifts and a Trajectory Oftransformation of the Agrarian Sector Underthe Conditions of Paradigmization of Theconcept of Sustainable Development of Therural Economy. MODERN ASPECTS OF SCIENCE. 10-th volume of the international collective monograph. Praha, Czech Republic: Vědecké perspektivy, 2021. P. 135–169.

8. Bozhanova V., Korenyuk P., Lozovskyi O., Belous-Sergeeva S., Bielienkova O., Koval V. Green Enterprise Logistics Management System in Circular Economy International Journal of Mathematical, Engineering and Management Sciences, 2022. Vol. 7, No. 3, 350-363, 2022 https://doi.org/10.33889/IJMEMS.2022.7.3.024

9. Marchuk, Tetyana, Ryzhakov, Dmytro, Ryzhakova, Galyna & Stetsenko, Sergiy. (2017). Identification of the basic elements of the innovationanalytical platform for energy efficiency in project financing. Investment Management and Financial Innovations, 14(4), 12-20. DOI: http://10.21511/imfi.14(4).2017.02

**10.** Circular economy–From review of theories and practices to development of implementation tools. Resources, conservation and recycling, 135, 190-201.

11. Shpakova G. (2019). Strategem of biospheros compatibility of construction: modern problems of architectonics, economic policy and development. Management of Development of Complex Systems, 40, 202 - 208, [in Ukrainian]; dx.doi.org\10.6084/m9.figshare.11970042.