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## **INDUSTRIAL SYSTEMS ECOLOGIZATION AS AN URGENT NEED AND NECESSITY OF MODERN DEVELOPMENT**

**Tarayevska Lesia Stepanivna**

*Ph.D. in Economics, Associate Professor of  
Management and Administration Sub-Department,*

**Chychul Christina-Maria Mykolayivna**

*Master of the Department of Ecology,*

*Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine*

*The article explores issues concerning the activation of the production and economic activities based on environmental management, which is considered to be the basis for sustainable economic growth in Ukraine that requires appropriate governmental control of production systems ecologization mechanisms development and implementation that would not only function within acceptable environmental parameters, but also provide efficiency and profitability for business entities.*

**Keywords:** *ecologization, production system, sustainable development, environmental management, resources, environmental goods, development.*

**Introduction.** A characteristic feature of the modern global economy in general and in Ukraine in particular, is its ecological imbalance that causes adverse changes in the natural environment and generates inflationary pressures that affect the production system. Taking this into account environmental issues has become exceptionally strong in providing natural balance and activating production and economic activities which is considered to be the basis for sustainable economic growth in Ukraine. This issue requires the development and implementation of governmental control relevant mechanisms of ecologization, which would not only leave the business units life within acceptable environmental parameters, but also improved them.

**Analysis of recent researches and publications.** An important contribution in order to solve the problem of ecologization have been done by our, Ukrainian

scientists, namely: Amosha O.I. [1], Bilorus O.G. [3], Borshchevskyi P.P. [4], Veklych O.O. [4, 5], Danylyshyn B.M. [5, 6], Mishchenko V.S. [6], Doroguntsov S.I. [6], Voovk, V.I. [7], Kravtsiv V.S. [8, 9], Shapar, A.G. [10, 11], Skrypnyck, A.A. [10], Burkyns'kyi, B.V. [11], Rudenko, L.G. [11], Zinovchuk N.V., Kononenko, Lukinov I.I., Melnyk L.G., Onyshenko O.M., Palamarchuk M.M., Tregobchuk V.M., Kharichkov S.K., Shevchuk V.Ia., Iakubovskyi M.M., etc.

In the researches of this issues foreign scientists' works are also used, namely: W. Baumol [12], K. Boulding [13, 14], Al. Gore [15], Mey, K [16] B. Korb [17], Danylov-Danylian V.I. [18], K. Gofman [19], C. L. Spash [20, 21], H. George, K. Nort, J. Palminsano, Jan Tinbergen, Andre Ward, etc.

**Previously unsettled problem constituent.** However, some of its aspects, particularly, those associated with production systems ecologization under environmental crisis and business entities difficult economic situation require in-depth study, especially in the context of the interaction of economic activity – man and environment. Therefore, there is a need to research new approaches in order to solve these issues.

**Main purpose of the article.** Basing on a systematic approach to summarize our experience and give practical advice, which in the integral form reveal the essence of ecologization processes of production systems.

**Results and discussions.** It is clear that economic activity is always associated with the transformation of heterogeneous resources. In the process of production one type of resources is consumed and another is out. At the same time, the resources obtained at the output of one process move to the input of technologically next process. Incoming resources of any production process are divided into productive, labor, informational and of course natural that we take in nature. The term “nature” means a complete balanced system, with a large number of direct and indirect relationships between the individual components. Qualitative condition of which is characterized by: air quality, water, land status, quantity and diversity of flora and fauna, mineral resources. With the development of society, these characteristics are changing under the influence of cumulative human impacts and as a result, the amount and quality of natural resources is reducing. Providing the economy with natural resources for a long time has been not seen as dependent on natural laws. However, the laws of physics implies that the quantitative evaluations of all processes in living systems have energy expression and are spatially deterministic [22].

It should be mentioned that a logical explanation has the available in Ukraine system of environmental imbalances and the associated difficulties in the economy. This situation has not come today, but has accumulated over years of economic and political domination of the administrative-command system, that led to disruption of ecological-economic balance and caused some environmental damages. Dispensable

methods of economic management and administration dictation over all aspects of social life provoked eco- economic crisis.

Environmental management analysis in Ukraine during the operating of administrative-command system demonstrates high concentration level of industrial production, environmental abuse, finance environmental protection measures using residual principle. This method of using the environment caused consequences that can be felt today and inherent in the future. Therefore, increasing the production of goods and services excluding environmental determinants of preserving natural capital is impossible.

The scope of industrial activity is closely linked with problems in terms of coordinates «man – nature» and «society – environment», updating of which is the result of the effects on the environment [23, 24].

Entrepreneurship ecologization has global trends, is popularizing and has become the practice of many Western and multinational companies. The positive fact is that today, Ukrainian consumers offered with a new type of products by domestic manufacturers such as: consumer society «Vybir», trademarks such as: «Dobrynia», «Volynskii ekologichniy product», «Eko», «Eko-FRIDG». There are several companies or small businesses in most regions that partially process garbage, waste productions. In addition, a number of private companies provide services of ecotourism, inventory of pollution sources, control over emissions and discharges, monitoring, installing ventilation, cleaning and protective mechanisms. Among the representatives of eco-business there are also Ukrainian companies with foreign investments.

Somehow or other, globalization processes that held over modern world, somewhat reduce economic growth of the national economy as a whole and ecologization particularly. Since almost 60% of world GDP is controlled by transnational corporations. There is a considerable fraction of imported eco-product offered in Ukrainian market. These products are primarily offered to consumers not only in the supermarkets but also in online stores and by representatives of network marketing. Therefore, more and more Ukrainians are buying products with different types eco-certification such as «Ko-Si», «Logia eko», «EkoMarka», «Bra Miljöval», «Biolavo», «Sodasan», «Argital», «AlmaWin», «NONICARE», «Etamine du Lys», «WELEDA», «KLAR», «Eco Cosmetics», «Sonett», «Forever Living Products», «Yves Rocher», «Vivasan», and others.

However, not all consumers are able to recognize the symbolism of eco-labeling and environmental certification. Therefore we propose to develop newsletters for getting acquainted with the main types, also it's appropriate to inform consumers about the meaning of the labeling of imported goods. For instance products certified by ISO, Good Manufacturing Practice (GMP, GCP, GLP), Kosher, European

Directorate for the Quality of Medicines & HealthCare (EDQM), Deutsches Institut für Normung eV – DIN, TÜV SÜD, and others.

Also in the regions of our country programs concerning ecologization has been implemented. For different population groups, including: the emergence of ecology course in school programs, promotion of eco-habits in public organizations, and in the source of spreading international educational project "Education for Sustainable Development in Action", acquaintance of employees with the basics of environmental management and motivation to do so. For example, the company «Foxtrot», Nemiroff, law firm Magisters, Ernst & Young, ProCredit Bank, «Kyivstar» and MTS take part in the «Green Office», which creates a positive image of the company and reduces ecodestructive impact in the environment.

Further development of interaction in the system "man-nature" requires mastery of ecological culture not only those who are directly related to nature and its resources, but also those who are engaged in different fields, which, at first glance, far from nature [23, 24, 25]. If during the production process, products and packaging contains have no toxic substances in the offices of enterprises they save water, energy, efficiently use raw materials and waste are sorted and brought to recycling, then we can talk about the use of the principles of environmental management, which is the key to the commercial success of manufacturing systems .

From our point of view an important component of ecologization is the formation of public awareness. There are interesting results of American Scientists studies (Fig. 1). From the given information the conclusion can be made that about a third of US consumers are concerned about key environmental and social issues and practicing environmental actions and their number is growing.

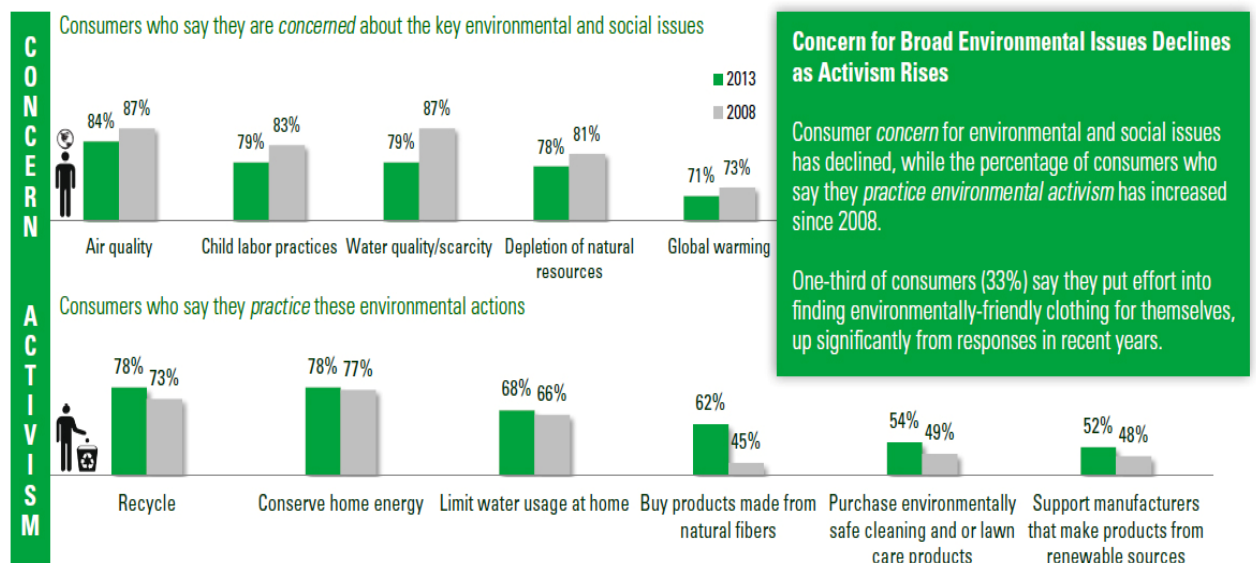


Fig. 1. Results of the studies that have been conducted in the US [27]

During the next wave of regular project ECO Omnibus market research agency IRSGroup inquired urban residents of Ukraine how they care about the environment. Poll found that nearly 2/3 of respondents (62%) take a responsible approach to natural resources use, waste gas efficiently, turn off lights and appliances when they are not needed, spend a minimum amount of water. Also, about a quarter of respondents (27%) buy ecologically clean provisions and carefully choose the food. Besides, some of the respondents (23%) are engaged in sorting garbage at home, and another part (21%) - plant trees and care for plants [26]. When asked which activities / actions concerning environmental issues respondents would like to participate in, 24% said they would like to buy organic food, 22% want to do gardening and planting trees, 19% of respondents have a desire and willingness to take on special items receiving the batteries, rechargeable batteries and old cell phones, which is already a good start and the potential for the development of food processing industry, and interesting topics for various eco-actions [28].

This situation indicates that some Ukrainian consumers today are open for environmental initiatives, for own life ecologization and have a willing to support such events directly involved, which in turn is an incentive for those companies that show or have a plan for any «ecologization» activity.

Prospects of the production systems ecologization development are generally expanding space. In Ukraine the number of consumers who opt for environmentally friendly goods and services is rapidly growing. Thus, the competitiveness of products and services of production systems that use the principles of sustainable and balanced nature is also growing.

**Conclusions and further researches directions.** Thus, the reasons for the critical ecological situation in Ukraine is thoughtless economic activities under the conditions for the over-exploitation of natural resources not taking into account environmental laws, factors, requirements and criteria. Further improvement of this situation is impossible without production systems and thinking of the entire population ecologization, without maintaining environmental priorities at national, regional, local and personal levels. The need to solve the comprehensive environmental education, advocacy and reliable environmental information problems in legislative level. The basis of sustainable development of society are balanced requirements economic development as well as opportunities to reproduce ecologically valuable natural resources.

Entrepreneurship ecologization has global trends and has become a daily practice for many Western businessmen. Ukrainian experience shows the positive response of business community to the needs of solving environmental problems, increasing environmental awareness of citizens and their commitment to healthy living, ever-growing interest in the development of environmental business and ecologization of existing businesses. These processes encourage environmental

policy in manufacturing and influence on corporate development strategy. That's why we offer reminded about environmental issues in advertising and public relations, which in the near future will become ever more popular and provide possibilities on the one hand for conducting successful business, and on the other hand - to save the environment. Legal system is also changing and thus, they govern eco-audits and eco-insurance. So, for professionals in public relations and advertising new jobs will be created and interesting opportunities for creative realization will appear. We also, consider it appropriate to take into account the increasing role of entrepreneurs in the formation of ecological consciousness Ukrainian society, and to consolidate the possibility of special conditions for conducting business with the condition - practical adherence to the principles of rational environmental management, at the legislative level.

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## **ЕКОЛОГІЗАЦІЯ ВИРОБНИЧИХ СИСТЕМ ЯК НАГАЛЬНА ПОТРЕБА ТА НЕОБХІДНІСТЬ СУЧАСНОГО РОЗВИТКУ**

**Тарасівська Леся Степанівна**

*кандидат економічних наук, доцент кафедри менеджменту і адміністрування,*

**Чичул Христина-Марія Миколаївна**

*магістр кафедри екології,*

*Івано-Франківський національний технічний університет нафти і газу, Україна*

*У статті досліджено питання активізації виробничо-господарської діяльності на засадах раціонального природокористування, яке розглядається як основа сталого економічного зростання України, потребує розроблення і впровадження відповідних механізмів державного регулювання екологізації виробничих систем, які б не тільки функціонували у межах життєво допустимих екологічних параметрів, а й забезпечували ефективність і прибутковість господарюючим суб'єктам.*

***Ключові слова:** екологізація, виробнича система, збалансований розвиток, раціональне природокористування, ресурси, екотовари, розвиток.*

## **ЭКОЛОГИЗАЦИЯ ПРОИЗВОДСТВЕННЫХ СИСТЕМ КАК СУЩЕСТВЕННАЯ ПОТРЕБНОСТЬ И НЕОБХОДИМОСТЬ СОВРЕМЕННОГО РАЗВИТИЯ**

**Тараевська Леся Степановна**

*кандидат экономических наук, доцент кафедры менеджмента и администрирования,*

**Чичул Кристина-Мария Николаевна**

*магистр кафедры экологии,*

*Ивано-Франковский национальный технический университет нефти и газа, Украина*

*В статье исследованы вопросы активизации производственно-хозяйственной деятельности на основе рационального природопользования, которое рассматривается как основа устойчивого экономического роста Украины, требует разработки и внедрения соответствующих механизмов государственного регулирования экологизации производственных систем, которые бы не только функционировали в пределах жизненно допустимых экологических параметров, но и обеспечивали эффективность и прибыльность хозяйствующим субъектам.*

***Ключевые слова:** экологизация, производственная система, сбалансированное развитие, рациональное природопользование, ресурсы, экотовары, развитие.*