



Висновки і перспективи подальших досліджень. В умовах воєнного стану агропромисловий комплекс України виступає одним із ключових секторів забезпечення економічної та продовольчої безпеки. Його ефективне функціонування можливе лише за умови високої адаптивності бізнес-процесів.

Адаптація має ґрунтуватися на цифрових рішеннях, диверсифікації виробничо-збутових каналів, розвитку кооперації, активній взаємодії з державними та міжнародними структурами. Подальші дослідження доцільно спрямувати на розробку моделей резильєнтності агропідприємств, оцінку ефективності впроваджених інновацій та формування системи страхування воєнних ризиків.

Таким чином, адаптивність бізнес-процесів АПК є не лише необхідною умовою виживання підприємств у період війни, а й основою для майбутнього відновлення та розвитку української економіки.

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SIGNS OF ENTHROPOGENIC SYSTEMIC CATASTROPHE OF THE XXI CENTURY

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Annotation. The concept of entropy is used for various types of organizational systems from micro to mega level. Inefficient management of an object always leads to an increase in entropy and negative consequences, including entropogenic systemic disasters. The signs of this global catastrophe of the XXI-st century are highlighted in the publication.

Keywords: entropy, organizational system, entropogenic systemic disaster, UN.





Анотація. Поняття «ентропія» використовуються до різного роду організаційних систем від мікро- до мега-рівня. Неефективне керування об'єктом завжди призводить до наростання ентропії та негативних наслідків, в тому числі до ентропогенних системних катастроф. Ознаки цієї катастрофи глобального характеру XXI століття висвітлені в публікації.

Ключові слова: ентропія, організаційна система, ентропогенна системна катастрофа, ООН.



Entropy is a fundamental concept that is used in various fields of science. The application of this concept is primarily relevant to such sciences as: physics, cybernetics, mathematics, biology, information theory. This term was introduced in 1865 by the German physicist Rudolf Clausius. He defined entropy as a measure of the natural tendency of thermal energy to dissipate (dispersion). Since then, this concept has been introduced into thermodynamics, and only then began to be used in the humanities. In general, entropy is understood as a measure of chaos and disorder in a system, the dissipation of energy and information.

The use of the concept of entropy in management is also becoming widespread, although it is worth noting that compared to traditional approaches, the focus on it from the point of view of theory and practice in economic sciences, according to the authors, requires more attention and deeper research.

For example, the focus of attention on entropy, including in the context of enterprise management, is considered in the following articles [1–5].

At the same time, the concept of entropy is used for various types of organizational systems from micro to mega level. Misunderstanding the essence of this concept and ineffective management of the object always leads to an increase in entropy and negative consequences, including systemic disasters. Thus, in the author's article [5, p. 11], the concept of entropogenic systemic disaster is defined as the result of an uncontrolled process of entropy increase in an artificial organizational system, causing its collapse (self-destruction) due to the inability of the controlling subsystem to transform the organizational system from the initial chaotic state to the target system state, i.e. one in which negentropy is produced.

It should be noted that a similar catastrophe, which we describe on the example of the USSR in [5], can and does occur in real life with artificial organizational systems of any level, starting from the family and ending with unions of states and other supranational entities. The main difference lies in the scale and duration of the consequences.

This necessitates the study of entropogenic systemic catastrophes, especially since the consequences of such a catastrophe that occurred with the USSR are still not understood and led, among other things, to tragic events in the form of a full-scale war of the Russian Federation against Ukraine.

This publication describes the signs of the onset of the entropogenic systemic catastrophe of the XXI-st century, which is the purpose of the work.

Judging by the symptoms of the systemic crisis, it is taking place in the international organization «United Nations» (UN). As is known, the existing organization «UN» was created by the leaders of the victorious countries in World War II by Roosevelt (USA), Stalin (USSR) and Churchill (Great Britain) in 1945 in the image and likeness of the well-known international organization «League of Nations».

Let us consider the main reasons for the emergence of a systemic crisis in the created organization «UN». And therefore, we will further conduct a systematic analysis of some important statutory provisions of the organization «UN» as the causes of systemic diseases in it.

The creation of a system-excellent organization taking into account the systemic approach begins with the task of its system-forming factor as the formulation of the specific purpose of the organization. The definition of the purpose should contain the characteristic features of the organization being created as a system in order to achieve a given target state. The charter of the created international organization «UN» declares the goals and ways to achieve them. However, it should be noted that from the existing formulation it is difficult to judge over the past 80 years of its existence and functioning to what extent it has achieved the statutory goals and justified the costs of its maintenance. The inability of the «UN» organization over the past period to maintain peace and security on the planet has clearly been revealed. The international community has reached a bifurcation point and is on a trajectory of increasing probability of World War III with the use of nuclear weapons accumulated in the world during the existence of the «UN» organization, one of the key tasks of which, according to paragraph 1. Article 1 of the Charter, is: «To maintain international peace and security, and to that end: to take effective collective measures for the prevention and removal of threats to the peace,



and for the suppression of acts of aggression or other breaches of the peace, and to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international disputes or situations which might lead to a breach of the peace» [6].

After the creation of the UN in the second half of the XX-th century and until a quarter of the XXI-st century, it did not prevent or stop any of the numerous military conflicts, as well as wars that arose with the active participation of the permanent members of the Security Council. During this period, the number of countries possessing nuclear weapons increased to 9 and spending on armaments in the UN member states increased many times. The absence of a system-forming factor as a clear and unambiguously defined purpose of the created UN organization became one of the reasons for the emergence of a systemic disease in it.

It should also be noted the imperfection of the Security Council in determining and appointing its permanent members with an unconditional right of «veto». Such a procedure in the UN Security Council is intended for its permanent members, which gives them the right, being violators of the UN Charter, to block the implementation of any, most often correct, decision of the Security Council.

In the interstate environment, the internal environment of the UN organization, after World War II, the global balance of power changed, that is, three groups of states were informally formed with the goals of their creation and regimes of state governance, as well as the living conditions of citizens and relations to the environment.

The first group of technologically and economically developed UN member states with democratic governments, favorable living conditions for their citizens, relatively ecologically clean territories, high-tech armed forces, and a high combined nuclear potential. The informal leader of the first group of states is the United States. The goal of its creation is economic development and prosperity, and the defensive alliance «NATO.» The group has three permanent members of the Security Council with veto power. The leader of the first group has a nuclear potential equal to that of the leader of the second group.

The second group of UN member states features authoritarian governments, unfavorable living conditions for their citizens, and polluted environments. They have large armed forces equipped with modern offensive weapons and possess a combined nuclear potential equal to or greater than that of the states in Group I. The informal leaders of this group are Russia and China. One of the goals of this group is to expand its territory by seizing neighboring states through hybrid warfare and terrorist special operations, to bring as many Third World countries under its influence as possible, and to establish authoritarian regimes there. Two permanent members of the Security Council have veto power. Russia poses a real threat of global nuclear war.

The third group of developing UN member states with mixed government structures (former colonies), low living standards for their citizens, and environmentally polluted territories. The states in this group have primarily defensive, and some have offensive, armed forces equipped with modern weaponry. Two states possess nuclear weapons (India and Pakistan). The group has the largest population. Some African states have armed terrorist groups, and the drug trade is thriving in Latin American and Asian states. India is the informal leader of the group.

It should be noted that most of the wars that arose were initiated or waged by permanent member states of the UN Security Council, which possessed their traditional capabilities for strengthening their weapons and veto power.

From a systemic perspective, it follows that the global organization «UN,» and in particular the Security Council, do not comply with the conditions for the operation of W. Ross Ashby's law of requisite diversity. This means that, while the UN Charter provides a variety of regulations governing the actions of violating states, it lacks those that would constitute adequate violations and effectively allow them. Failure to comply with this law has led to impunity for violators of the UN Charter and to the growth in the number and scale of criminal activity worldwide and its destructive power, including the possibility of World War III.

A significant systemic reason for the current UN's low effectiveness, along with the aforementioned factors, is the lack of motivation and interest among UN member states in achieving its founding and operational goals. This is especially true if these goals are not clearly defined. This means that UN member states are not mobilized to achieve a favorable international external environment in a systemic relationship with the UN as a supersystem. Therefore, this systemic reason also contributes to the systemic imperfections of the current UN.

In addition to the aforementioned root causes of the systemic imperfections of the established UN organization, a number of negative aspects should be cited that contribute to the emergence of a systemic crisis in the area of maintaining peace and international security, such as: non-compliance with the fundamental norms of international law; failure to recognize the primary importance of the UN Charter for establishing legal norms in relations between states; significant



imperfections of international legal categories, the main ones being the right of nations to self-determination and the principle of territorial integrity of states that are in antagonistic conflict with each other.

Thus, a catastrophic imbalance has developed between the emerging threats to global security and the ability of the international community, represented by the UN, to prevent and eliminate these threats. Consequently, a governance crisis is evident within the existing international organization, the UN, with a high probability of a mega-scale man-made systemic catastrophe.

Further research will be aimed at developing theoretical and methodological foundations for preventing the occurrence of entropogenic systemic disasters.

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ЕКОСИСТЕМНА ПАРАДИГМА РОЗВИТКУ БІЗНЕС-ПРОЦЕСІВ КОРПОРАТИВНОГО ПІДПРИЄМСТВА

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Анотація. Обґрунтовано необхідність переходу від традиційної, замкненої моделі управління бізнес-процесами до екосистемної парадигми. Розкрито, що в умовах цифрової трансформації та зростання невизначеності підприємства досягають більшої конкурентоспроможності у разі ідентифікації себе у складі складних адаптивних систем, де ринкові переваги створюються через мережеву взаємодію. Запропоновано концептуальний підхід до моделювання наскрізних бізнес-процесів, що охоплюють екосистему підприємства, заснований на онтологічному інжинірингу. Доведено, що такі системні властивості, як резильєнтність та економічна безпека, є емерджентними результатами належної організації транзакційних взаємодій між учасниками екосистеми.

Ключові слова: бізнес-екосистема, розвиток бізнес-процесів, складна адаптивна система, онтологічне моделювання, взаємодія стейкхолдерів, резильєнтність, спільне створення цінності.

