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*Alexander Melnikov, Yaroslav Kotliarevskyy, Andrey Shtangret***THEORETICAL AND METHODOLOGICAL FOUNDATIONS FOR PROVIDING SUSTAINABLE DEVELOPMENT OF THE INFORMATION SPHERE IN UKRAINE***Олександр Мельников, Ярослав Котляревський, Андрій Штангрет***ТЕОРЕТИКО-МЕТОДОЛОГІЧНІ ЗАСАДИ ЗАБЕЗПЕЧЕННЯ СТАЛОГО РОЗВИТКУ ІНФОРМАЦІЙНОЇ СФЕРИ УКРАЇНИ***Александр Мельников, Ярослав Котляревский, Андрей Штангрет***ТЕОРЕТИКО-МЕТОДОЛОГИЧЕСКИЕ ОСНОВЫ ОБЕСПЕЧЕНИЯ УСТОЙЧИВОГО РАЗВИТИЯ ИНФОРМАЦИОННОЙ СФЕРЫ УКРАИНЫ**

*Based on the well-known interpretations of the concept of «sustainable development», the main provisions of the Strategy of Sustainable Development «Ukraine – 2020» and the actual state of the domestic information sphere, theoretical and methodological foundations for ensuring its sustainable development have been formed. The definition of the information sphere is defined, the interests of citizens, society and the state are determined, the tasks of subjects and management objects are clarified, the essence of the institutional mechanism of state regulation of the information sphere is clarified, the set of basic principles and the list of strategic tasks for ensuring sustainable development of the information sphere.*

**Key words:** information sphere; sustainable development; information; principles; information security.

Tabl.: 4. Bibl.: 37.

*Спираючись на відомі тлумачення поняття «сталий розвиток», основні положення Стратегії сталого розвитку «Україна – 2020» і фактичний стан вітчизняної інформаційної сфери сформовано теоретико-методологічні засади забезпечення її сталого розвитку. Дано визначення інформаційної сфери, окреслено інтереси громадян, суспільства та держави, з'ясовані завдання суб'єктів та об'єктів управління, розкрито суть інституційного механізму державного регулювання інформаційною сферою, обґрунтовано сукупність основних принципів та перелік стратегічних завдань забезпечення сталого розвитку інформаційної сфери.*

**Ключові слова:** інформаційна сфера; сталий розвиток; інформація; принципи; інформаційна безпека.

Табл.: 4. Бібл.: 37.

*Опираясь на известные толкования понятия «устойчивое развитие», основные положения Стратегии устойчивого развития «Украина – 2020» и фактическое состояние отечественной информационной сферы сформированы теоретико-методологические основы обеспечения ее устойчивого развития. Дано определение информационной сферы, определены интересы граждан, общества и государства, выяснены задачи субъектов и объектов управления, раскрыта суть институционального механизма государственного регулирования информационной сферы, обоснована совокупность основных принципов и перечень стратегических задач обеспечения устойчивого развития информационной сферы.*

**Ключевые слова:** информационная сфера; устойчивое развитие; информация; принципы; информационная безопасность.

Табл.: 4. Библ.: 37.

**JEL Classification:** E270, E690, H110

**Formulation of the problem.** In most cases, when it comes to sustainable development, it means optimizing the development of society on a global scale, since the concept of sustainable development from the outset has been international in nature because of the systematic nature of deep interconnections both within mankind and the metasystem «society – nature». But this utmost importance, of course, does not exclude the corresponding work in other, no less important spheres of development of human society. The interpretation of information and knowledge as the newest unlimited resources, the growing importance of information for management at all levels and the priority of satisfying the information interests of each citizen forms a new plane of tasks that involves the search for conceptual bases for ensuring the sustainable development of the information sphere (SDIS).

**Analysis of recent research and publications.** The research of information sphere was carried out by such domestic and foreign scientists as I. Aristova [1; 2], O. Baranov [3], A. Briggs, P. Cobley [35], Y. Burylye [4], V. Horovy [5; 6], M. Castells [28], V. Konakh [7], M. McLuhan [31], F. Machlup [30], O. Onyshchenko and other [14–16], E. Semenyuk [21], A. Ursul [24; 25], O. Chubukova [26] and other.

**Allocation of previously unresolved parts of a common problem.** Focusing on the definition of the essence and content of the information sphere, these scientists only determined the current boundaries and parameters of development, not carefully considering the process of its management and ensuring its sustainable development.

**The purpose of this article** is to determine the theoretical and methodological foundations of the provision of the SDIS of Ukraine.

**Statement of the main provisions.** International experience shows that many countries have developed and approved their own concepts of sustainable development, in which the tasks of a global and regional scale are specified in their own way. Ukraine also has the Strategy of Sustainable Development «Ukraine – 2020» [23], adopted in 2015. The path to its emergence was quite long.

At one time, Ukraine officially joined a number of international decisions on sustainable development [27; 29; 32-34; 36; 37]. Despite this for a long time, the state authorities could not determine the ways of implementing the provisions of international documents and agreements in this area in domestic legislation [10]: since the second half of the 1990s, XX century. in Ukraine, several attempts were made to create and approve the Concept of Sustainable Development of the country: first there were two drafts of the national concept of sustainable development in 1997 and 2000 [8; 9], then several draft laws of Ukraine [18–20] and the National Paradigm of Sustainable Development of Ukraine (2012) [17].

The signing on March 21, 2014 of the political part of the Association Agreement with the EU [22] was the last impetus to the adoption of the Strategy of Sustainable Development «Ukraine – 2020» [23]. The Strategy of Sustainable Development «Ukraine 2020» defines the goal, traffic vectors, road map, overriding priorities and indicators of proper defense, socio-economic, organizational, political and legal conditions for the establishment and development of Ukraine [23]. The goal of the Strategy is the introduction of European standards of life in Ukraine and Ukraine's access to the leading positions in the world. For this, the movement forward will be carried out according to the following vectors: development, security, responsibility and pride.

Sustainable development in the Strategy «Ukraine – 2020» is «carrying out structural reforms and, as a result, raising standards of living. Ukraine should become a state with a strong economy and with advanced innovations. For this, first of all, it is necessary to restore macroeconomic stability, ensure sustainable economic growth in an environmentally sustainable manner, create favorable conditions for economic activities and a transparent tax system» [23].

Based on the main positions of the Strategy and in accordance with a specific goal, it is advisable to carefully study and form the theoretical and methodological foundations for the provision of the SDIS in accordance with the content of the concept of sustainable development and the actual state of the information sphere in Ukraine.

It should be noted that the information sphere should be considered as an economic system, which should include such elements (in accordance with the process of production and distribution of information products): the creation of a work (information); information and analytical activity; production (provision of information services) and distribution of information products. This is a branch of national production, in which about 15 thousand enterprises employ about 200 thousand employees (the dynamics of these changes are seen in table 1).

With regard to sustainable development, the stability of the system in engineering is defined as its property of preserving the values of constructive and regime parameters within certain limits despite the impact of the system. Backward communications, inherent in the information sphere as an economic system [11; 12], lead to unevenness, instability of its development, is to slow or accelerate the rate of its development. Sustainable development involves maintaining a balance between the interrelated elements of the system. That is, under sustainable development, one must understand the ability of any system to return to a certain equilibrium state after the termination of the impact of certain perturbing external and internal factors on it.

Table 1

*Indicators characterizing trends in the development of the information sphere in Ukraine*

Indicators	2002	2003	2004	2005	2006	2007	2008
number of enterprises, units	12 935	14 003	15 324	16 862	17 205	18 257	17 456
number of employed workers, thousands of people	297,9	309,8	307,0	333,3	325,8	329,9	313,4
Indicators	2009	2010	2011	2012	2013	2014	2015
number of enterprises, units	18458	15081	16142	15119	16863	15129	14270
number of employed workers, thousands of people	282,0	254,5	253,8	243,0	243,8	216,1	185,4

Source: Kotliarevskyy, Y., Melnikov, A., Shtangret, A. et. al (2016). *Kontseptualni zasady zabezpechennya staloho rozvytku informatsiinoi sfery Ukrainy* [Conceptual framework for ensuring sustainable development of the information sphere in Ukraine]. Kyiv: Center for Educational Literature, pp. 148–149.

All systemic formations are developing, but this or that economic system may or may not possess the ability for sustainable development. The capacity for the SDIS determines the inherent economic and scientific and technical potential, the relationship with the external environment. That is, **the sustainable development of the information sphere** is the creation of appropriate conditions for a sustainable growth in the production of information products capable of ensuring the interests of the present and future generations provided that information security is ensured.

By **information security** we mean ensuring the access of a person and citizen at any time to information products necessary for its all-round development (that is, the conditions for completeness, timeliness and availability of information must be fulfilled). Provided information security is achieved, information products are generally available and every citizen needs it, can freely receive it (except in cases stipulated by the current legislation). There are several groups of interests that must be met in the process of ensuring information security (table 2).

Table 2

*Groups of interests that need to be met in the process of ensuring information security*

Groups of interests	Interests in the information sphere are:
Citizen	realization of its constitutional rights to free access and use of information products for activities not prohibited by law, physical and intellectual development
Societies	ensuring the interests of a person and a citizen in this sphere, continuing democratic development, achieving and maintaining public consent
Nation	creation of conditions for the SDIS, ensuring the constitutional rights and freedoms of citizens to access and use information products to ensure the inviolability of the constitutional order, Ukraine's sovereignty and territorial integrity, political, economic and social stability in the state

Source: Melnikov, A. (2016). *Kontseptualni zasady zabezpechennya staloho rozvytku informatsiinoi sfery Ukrainy* [Conceptual bases of maintenance of a sustainable development of information sphere of Ukraine]. *Formuvannya rynkovykh vidnosyn v Ukraini – Formation of market relations in Ukraine*, no. 9 (184), pp. 76–80.

Speaking of the SDIS it is necessary to understand that it consists in promoting the achievement of the planned development parameters at the macro level.

There are two forms of realization of the functions of the state: legal and organizational. The legal form consists in the activities of state bodies related to norm-setting activities, while the organizational form is connected with the implementation of regulatory functions. To ensure the development of the SDIS, it is necessary to establish an appropriate institutional mechanism, as the institutional environment is the basis for sustainable development. The **institutional environment** of the information sphere is understood as the totality of public authorities, directly or indirectly influencing the sustainable development of the national information sphere. That is, the institutional environment covers the aggregate of the relevant state authorities and determines their impact on the implementation of the state information policy.

## ТЕОРЕТИЧНІ ПРОБЛЕМИ РОЗВИТКУ НАЦІОНАЛЬНОЇ ЕКОНОМІКИ

Under such conditions, the role of regulatory subjects is performed by government bodies, and subjects are business entities and individual citizens.

The aggregate of subjects of state regulation of the development of the information sphere, by its influence on its components is divided into direct and indirect. In the process of ensuring the SDIS, the ability and efficiency of fulfilling duties and tasks by the main subjects of the implementation of the state information policy is determined by the available resources and the regulatory framework.

The complexity of economic relations between subjects and institutions of the institutional environment for the provision of the SDIS and its means of implementation requires a more detailed study of the mechanism of state regulation. Under the term mechanism, as a rule, understand the system, the device, the method that determines the order of a certain type of activity; internal machinery, equipment, etc. – a system of certain links and elements, activates them [13]. Therefore, let's try to reveal the essence of the **institutional mechanism** of state regulation of the information sphere. It can be regarded as a system of economic, managerial and regulatory actions affecting the provision of the SDIS through the improvement of state regulation of this sphere of the national economy. That is, state regulation is the main element of the institutional mechanism of the SDIS.

**The purpose** of providing the SDIS is to improve the information policy, taking into account national interests, aimed at enhancing international cooperation and integrating the country into the global information space in the conditions of forming a knowledge economy to meet the needs of the individual and citizens.

**The strategic objectives** of the SDIS are:

- ensuring human and citizen's rights to free access to information products that are necessary for its all-round development, access to them for the poorest groups of the population;
- the growth of the well-being of the population and the support of educational innovations, overcoming the information asymmetry;
- use of economic innovations and new acceptable technologies for the development of information products production;
- environment protection.

State regulation of the SDIS should be based on the following **basic principles**, the content of which is disclosed below (table 3).

Table 3

*Principles of state regulation of sustainable development of information sphere*

<b>Principles</b>	<b>Their content</b>
Finding the balance of interests of a citizen, society and the state	provides for the participation of public organizations and citizens in monitoring the activities of public authorities in the information sphere, primarily for the implementation of the state's rights and freedoms of citizens with unconditional consideration of the needs of the poorest sections of the population
Complex legal regulation of public relations	the identification of the totality of these relations, the formation and implementation of the state policy of securing the SDIS as an integral part of the state policy of development of Ukraine and harmonization of the mechanisms used for this regulation
Coordination of actions of central and local public authorities	provides for the organization of this activity on the basis of the priority of the competence of central government authorities in the field of information security and the completeness of the power of local authorities in the development and use of regional information and telecommunications systems, communication networks, regional information resources
Development and application of international law	involves active and coordinated activities of central government bodies with their application and participation in the development of international instruments relating to SDIS

Source: Melnikov, A. (2016). Kontseptualni zasady zabezpechennya staloho rozvytku informatsisnoi sfery Ukrainy [Conceptual bases of maintenance of a sustainable development of information sphere of Ukraine]. *Formuvannya rynkovykh vidnosyn v Ukraini – Formation of market relations in Ukraine*, no. 9 (184), pp. 76–80.

The components of state policy in the information sphere are seen in table 4.

Table 4

*Measures to implement the state policy in the information sphere*

<b>Components of state policy</b>	<b>To implement the state policy of these components, it is necessary:</b>
Compliance with constitutional rights and freedoms of a person and citizen	ensure the constitutional rights and freedoms of the individual and citizen freely receive information products by any lawful means
	guarantee freedom of mass information and prohibition of censorship, prevent the circulation of information products promotes the incitement of national, racial or religious hatred and enmity
Components of state policy	To implement the state policy of these components, it is necessary:
Information support for the activities of public authorities	expand the capacity of the state mass media to timely and maximally complete the necessary information to citizens
	ensure the accumulation, preservation and effective use of domestic information resources
Development of modern information technologies	to develop and improve the domestic industry of information services and to increase the efficiency of using state information resources
	to develop production in Ukraine of modern means of informatization, telecommunications and communications, to provide state support to domestic fundamental and applied developments in this field
Protection of information resources from unauthorized access	to increase the security of information systems of public authorities, banking and financial-credit spheres, economic activity
	intensify the development of domestic production of hardware and software information protection tools and methods for monitoring their effectiveness

Source: Melnikov, A. (2016). *Kontseptualni zasady zabezpechennya staloho rozvytku informatsisnoi sfery Ukrainy* [Conceptual bases of maintenance of a sustainable development of information sphere of Ukraine]. *Formuvannya rynkovykh vidnosyn v Ukraini – Formation of market relations in Ukraine*, no. 9 (184), pp. 76–80.

**Conclusion.** The permanence of the information sphere is inextricably linked with the growth of production of information products, the effective use of economic and intellectual resources, the improvement of the well-being and quality of life of the population, and a stable and balanced use of nature. Only for a balanced economic, social and environmental component is it possible to provide the SIR for a long time. The information sphere as an unstable system can not self-development without external influence. The stability of production in the information sphere is determined by the specificity of market relations in information production, does not always fit into the modern model of a market economy and requires in many cases targeted government support. Further research requires the development of a system of indicators for the characterization of development and the SDIS.

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**Melnikov Alexander** – PhD in Technical Sciences, Doctoral of the Research and Financial Institute of the State Educational and Scientific Institution «Academy of Financial Management» (38 Druzhby Narodiv Blvd, 01103 Kyiv, Ukraine).

**Мельников Олександр Валерійович** – кандидат технічних наук, докторант, Науково-дослідний фінансовий інститут Державної навчально-наукової установи «Академія фінансового управління» (б-р Дружби Народів, 38, м. Київ, 01103, Україна).

**Мельников Александр Валериевич** – кандидат технических наук, докторант, Научно-исследовательский финансовый институт Государственного учебно-научного учреждения «Академия финансового управления» (б-р Дружбы Народов, 38, г. Киев, 01103, Украина).

E-mail: e\_research@ukr.net

**Kotliarevskyy Yaroslav** – Doctor of Economics, Professor, Deputy Director for Scientific and Organizational Work of the Research and Financial Institute of the State Educational and Scientific Institution «Academy of Financial Management» (38 Druzhby Narodiv Blvd, 01103 Kyiv, Ukraine).

**Котляревський Ярослав Вікторович** – доктор економічних наук, професор, заступник директора з науково-організаційної роботи науково-дослідний фінансовий інститут Державної навчально-наукової установи «Академія фінансового управління» (б-р Дружби Народів, 38, м. Київ, 01103, Україна).

**Котляревский Ярослав Викторович** – доктор экономических наук, профессор, заместитель директора по научно-организационной работе, Научно-исследовательский финансовый институт Государственного учебно-научного учреждения «Академия финансового управления» (б-р Дружбы Народов, 38, г. Киев, 01103, Украина).

E-mail: e\_research@ukr.net

**Shtangret Andrey** – Doctor of Economics, Professor, Head of the Department of Financial and Economic Security, Accounting and Taxation of the Ukrainian Academy of Printing (17 Pidvalna Str., 79000 Lviv, Ukraine).

**Штангрет Андрій Михайлович** – доктор економічних наук, професор, завідувач кафедри фінансово-економічної безпеки, обліку і оподаткування Української академії друкарства (вул. Підвальна, 17, Львів, 79000, Україна).

**Штангрет Андрей Михайлович** – доктор экономических наук, профессор, заведующий кафедрой финансово-экономической безопасности, учета и налогообложения Украинской академии печати (ул. Подвальная, 17, Львов, 79000, Украина).