# **Ukrainian Journal of Ecology**

Ukrainian Journal of Ecology, 2021, 11(1), 196-201, doi: 10.15421/2020\_31

**ORIGINAL ARTICLE** 

# Theoretical aspects of the concept of "quality of life" in the context of environmental safety

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Received: 14.11.2020. Accepted: 20.01.2021

There is no clear "life quality" concept in world legislation. The interdisciplinary nature of the term "life quality" is revealed, which stimulates scientists' research from different science branches. The history of the origin of the term and its transition from medicine to other areas is shown. It was held an overview of the main approaches to understanding the quality of life and indicators used in a broad and narrow sense. The differences in the perception of this among scientists and ordinary people are emphasized. Scientists are looking at the problem more broadly, given the projected impact of human activity on all environmental elements (water, air, land, biodiversity, human health, life expectancy). The population begins to associate the indicator of "health" with the environment, for the most part, only after having health problems and life-threatening. It is shown that the current legislation of Ukraine notes the direct dependence of the health of the Ukrainian people on the environmental security of the state, and the state assumes responsibilities for its provision. The author's scheme of factors of ecological influence on the quality of life of people is offered. The threat posed to human health because of goods and services of "demonstrative consumption" and its promotion by the media has been revealed. Proven the need for explanatory work among the population to understand the relationship between the state of the environment and human life quality, particularly health, life expectancy, reproductive capacity, has been proved. The importance of strengthening state and public control over the use of environmental resources was noted. Emphasis is placed on the need for further research to identify indicators that show the individual perception of the Ukraine population of environmental safety as a component of quality of life and their assessment of areas to improve environmental safety (ways, methods, and tasks). This study should be conducted, considering the indicators used in other countries and international scientific organizations.

**Keywords:** environment, quality of life, health, Ukraine.

## Introduction

Ensuring human life quality is mostly limited to the study of the economic component, and the environmental aspect is often overlooked. The impact of the environment is most often expressed in indicators of air, water, and soil pollution, but it should be borne in mind that the impact of the environment on food quality, human health, the viability of future generations is significant (Darmohray et al., 2019; Grymak et al., 2020; Kofonov et al., 2020; Lesyk et al., 2020; Martyshuk et al., 2020; Mazur et al., 2020; Piven et al., 2020; Slivinska et al., 2020; Boiko et al., 2020; Borshch et al., 2020; Sobolev et al., 2020). In Ukraine, the level of compensation for environmental pollution is set at the legislative level but does not calculate the cost of restoring health lost due to low environment and loss of the national economy due to reduced life expectancy. Such costs are accounted for in many countries worldwide and their alliances, such as the European Union. Even in the challenging political and economic situation in which our country currently finds itself, it is necessary to look for ways to strengthen environmental security to improve the quality of life, becoming more vital to Ukraine's position as a progressive state.

## Methods

Quality of life is a crucial indicator of the well-being of the population of any country. That is why the study of this problem is of interest to many scientific teams with various point of view:

- scientists-geographers pay more attention to the quality of life in the context of the development of separate territories and spatial organization of society:
- Lisovsky (2007) identified the foundations of sustainable economic, social and environmental development;
- Gorlenko (Gorlenko et al., 1991) considered the economic and environmental aspects of territorial development;
- Gukalova (2009, 2013) conducted a socio-geographical conceptualization of quality of life;
- Topchiev (2005) investigated the methodology, methods, and techniques for determining the quality of life from a sociogeographical point of view;
- sociologists pay more attention to all aspects of society:
- Campbel (Campbell et al., 1976) revealed the understanding of the quality of life in American science;
- a group of scientists led by Suslov and Lebedev (Suslov & Lebedev, 1982) demonstrated an interdisciplinary approach, combining social and geographical aspects and formulated their vision of the concept of quality of life;
- economic and environmental studies were conducted by Libanova (Libanova et al., 2013), Nozdrina (2001);
- the vision of the problem by medical scientists can be understood from the works of Azizi (Azizi et al., 2011);
- scientific works of political scientists of the USSR, in particular, Popov (1977) and Todorov (1980) are engaging in the historical context, as they compare the quality of life of the population with the ideological struggle;
- it should be noted that different biologists, including Lappo and Bochkareva (Lappo & Bochkareva, 1989), studied the impact of biological and environmental influences on urban residents' life quality.

The list of researchers can be extended for a very long time, as the quality of life today is an essential tool for assessing public administration and policy's effectiveness on territorial development, protection, and preservation of the environment necessitates continuous research in this area.

Unfortunately, the theoretical foundations of the definition of "quality of life" in the context of the population's environmental safety are insufficiently studied, which determines this article's purpose.

# Results

In the legislation of most countries of the world, including Ukraine, there is no definition of the concept of "quality of life" (from now on - QOL), although it is used more and more often in bylaws. Under US law, quality of life is determined by subjective well-being and reflects the difference between a person's hopes and expectations and his/her current experience. The best way to approach the measurement of quality of life is to determine the degree of fulfillment of the conditions that ensure a person's sense of happiness (https://definitions.uslegal.com/q/quality-of-life/).

The term "quality of life" originated in the mid-1930s in medicine, where it began to be used as a characteristic of the human body's ability to perform essential functions without aids (drugs, devices, tools), without surgery assistance. Later, the term was transferred to other sciences and became a multifaceted concept, covering various aspects of human life; many definitions of this concept were formulated because there is an inextricable link between it, the environment, and sustainable development, based on legality, social justice and rational use of resources.

Based on the fact that the concept of QOL – lies in the interdisciplinary field, it is advisable to determine the scientific framework of this study: regional economics, environmental policy, management, sociology. The main approaches to understanding QOL that are currently used are given in Table 1.

Morris index of physical quality of life is also used, which is determined by three indicators: introductory literacy rate, infant mortality, and life expectancy up to one year (показатели определяются по шкале от 0 до 100). The index of physical QOL reflects complex social relationships without theoretical explanations or biased approaches (Morris, 1980).

Assuming that there is no straightforward approach to QOL, and each person is an individual with their own needs and preferences, we can proceed to consider the main scientific views on the classification of needs:

- Abraham Maslow;
- Henry Alexander Murray;
- Kazimierz Obuchowski;
- Ian Gough & Len Doyal;
- Agnes Heller and others.

Maslow's theory of the classification of human needs developed in the 1960s is taken as a starting point in most investigations. The concept may be approached from more than one angle, in addition to philosophical, ethical, and psychological ones, such as human rights, health considerations, and environmental concerns (Keles, 2012).

There are several leading indicators of QOL in a broad sense (Barcaccia, 2013):

- satisfaction with life, which has a subjective nature and can change;
- multifaceted factors, ranging from physical health, psychological status, independence, family, education, wealth, religious beliefs, optimism, local services and transport, employment, social relations, housing, and the environment;
- cultural perspectives, values, personal expectations, and understanding of what a person wants from life;
- not just the absence of disease, but the presence of physical, mental, and social well-being (some people with disabilities believe that they have excellent QOL, while others continuously complain);
- a person's perception of his condition at a given time and the ability to control negative thoughts and emotions about this condition.

Table 1. Basic definitions of the concept of "quality of life", which have an environmental component

Author	Definition
Siciński and Strzelecki (Siciński & Strzelecki, 1976)	The level and relationship of two aspects of human existence are the possibilities of full personal development and life satisfaction.
Kolipiński (1978) Otok (1987)	Quality of life consists of the right to freedom and a life of dignity and prosperity Quality of life reflects the well-being, satisfaction of a community's needs and desires, emphasizing the quantity and distribution of public goods: health care, education, household services, crime protection, pollution control, preservation of natural landscapes, and historical heritage.
Wallis (quote is used from the Owsiński & Tarchalski, 2008)	QOL is a set of spatial-ecological, production, and cultural factors that make up the reality in which a person lives; each person has their own QOL model, which includes: housing, family life, children's future, ways of investing, professional activity, prestige, promotion, leisure, leisure, the rhythm of life, state of ecology, sports, conflict resolution. QQL essence is not in the choice of specific models but in what is obtained from implementing any model.
Borys and Knippschild (Borys & Knippschild, 2014)	QOL – in the general sense – is a way of life based on a specific system of values (axiological); this way of life, as a collective attribute of a person or group of people, depending on the tools used to describe it, can be subjectively or objectively expressed, one-dimensional or multidimensional, the tools used to describe the quality of life create different typology.
Libanova (Libanova et al, 2013)	QOL is the degree of satisfaction of the material, cultural and spiritual needs of a person.
Barcaccia (Barcaccia et al., 2013)	QOL is the general well-being of people and society, in which there are both positive and negative features of life.
World Health Organization	QOL is the individual's perception of his position in life in the context of cultural characteristics and value systems and in connection with his goals, expectations, standards, concerns.

In a narrow sense, according to several American scientists, which is shared by Bakhmatova (2011), Nugaev (Nugaev & Nugaev, 2003), Spiridonov (2010), and others, people determine the quality of their lives based on the presence and level of the following indicators: income, employment, education, age, sex, marital status, ethnicity, nationality, place of residence (village / city), health, appearance.

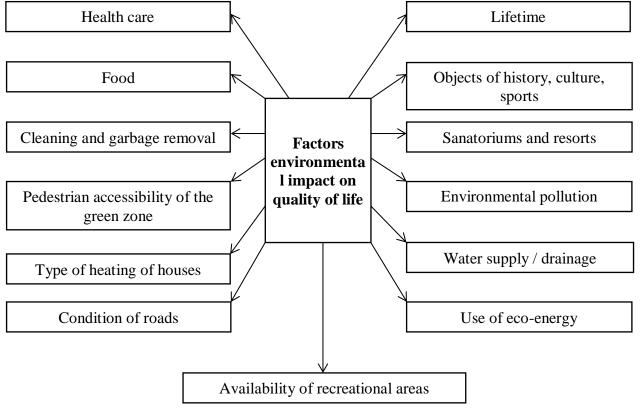


Figure 1. Factors of environmental impact on the quality of life

The list of indicators shows that it does not include the state of the environment, as it is not considered important enough by

ordinary people because they do not notice a direct link between the quality of life and ecology. Ordinary people also do not notice an indirect connection, although the environment's state dramatically affects the "health" indicator's value. Living in harmful conditions affects all spheres of human life, is reflected in the appearance, family functioning (healthy children and reproductive capacity), life expectancy, ability to work. The place of residence, level of education, and state of human development in each particular place greatly influence a person's perception of the quality of his life. Therefore, respondents of the same age, nationality, and gender, depending on living conditions, give opposite answers to the same questions. Gukalova expressed her opinion on the inattentive attitude of most of the population of Ukraine to the state of the environment, noting that the low level of public health remains one of the main factors hindering progress in shaping the quality of people's lives (Gukalova, 2013).

The connection between human health and the state of the environment at the legislative level is reflected in Article 16 of the Constitution of Ukraine, which states that ensuring environmental safety and maintaining the ecological balance in Ukraine, overcoming the consequences of the Chernobyl disaster – a catastrophe of global scale, preserving the gene pool of the Ukrainian people is the duty of the state (Constitution of Ukraine). Environmental safety is a state of the environment in which the prevention of deterioration of the ecological situation and the emergence of danger to human health is ensured. Environmental safety is guaranteed to the citizens of Ukraine by implementing a wide range of interrelated political, economic, technical, organizational, state, and legal and other measures (On environmental protection, 1991). Factors of environmental impact on the quality of life are shown in Figure 1.

#### Discussion

The results of the study of QOL depend on the conditions in which they take place, and we can distinguish the following types (Otok, 1987):

- a) the real situation (based on population surveys, observations, and other studies I.K.);
- b) is unquestionably asserted by political and social groups fighting for power or performing the functions of power structures; c) projected (based on modeling the expected preferences and needs of the population I.K.).

To form an objective picture from these three types of research, it is advisable to use a) and c), as the QOL indicator in the interpretation of stakeholders (b) may be unreliable. Some needs are natural (arising from the necessity of life), and others are imposed (formed in human society development). A person often perceives imposed needs as his own; this problem is described in detail by T. Veblen in his work "The Theory of the Leisure Class" (Veblen, 2016). Such imposed needs are called "demonstrative consumption", which replaces sound production. The needs of the category of demonstrative consumption in cases where they are deeply rooted in individuals' minds affect the formation of human needs. For example, out of a desire to buy a widely advertised fashion item, some people tend to give up personal safety and even cause irreparable damage to their health. In this case, the moral responsibility lies with the manufacturers who pay for media services to increase sales.

#### **Conclusions**

Many definitions of the concept of "quality of life" testifies to its ambiguity. The views of QOL in different sciences and ordinary people differ significantly: scientists consider the problem more broadly, given the projected consequences of human activities in the future, and the population is more concerned about today's problems: income, high-paying jobs, marital status.

Ordinary people begin to understand the decisive influence of the environment on their health only when the consequences of the harm done to the environment are felt (with the naked eye, you can see the pollution of water, land, air; as a result of human-made impacts, animals, plants or insects die en masse; statistical authorities record a critical increase in incidence).

The current legislation of Ukraine directly links the state of the environment with human health. However, despite this, environmental literacy remains at a deficient level, just like the individual environmental culture. There is a noticeable gap in the upbringing of the younger generation. Young people should also understand the harm from "conspicuous consumption", which, through the excessive acquisition of non-essential items, contributes to depleting Earth's natural resources. Therefore, it is necessary to improve the teaching of environmental behavior basics in educational institutions, comprehensively covering the problem, and its consequences.

It is necessary to strengthen state and public control over the use of environmental resources, in particular, the facts of liquidation through the construction of green areas in cities; to promote the prestige of living in a clean environment (non-contaminated natural sites and urban areas); encourage the introduction of energy-saving technologies.

#### References

- Azizi, H., Momeni, M., & Taghinia, M. (2011). Quality of life indices assessment for disabled and elderlypeople: Case study of Teheran. Paper presented at Real Corp 2011. In Pr oceedings of the 16-th international conference on urban planning, regional development and information society. North Rhine-Westphalia. Germany. Available from: http://programm.corp.at/cdrom2011/papers2011/CORP2011\_96.pdf.
- Bakhmatova, T. (2011). Comparative analysis of the concepts of the quality of life. Bulletin of the Irkutsk State Economic Academy. 05. Available from: <a href="http://eizvestia.isea.ru/reader/article.aspx?id=9732">http://eizvestia.isea.ru/reader/article.aspx?id=9732</a>.
- Barcaccia, B., Esposito, G., Matarese, M., Bertolaso, M., Elvira, M., & Grazia, De M. (2013). Defining Quality of Life: A Wild-Goose Chase? Europe's Journal of Psychology, 9(1), 185-203.
- Boiko, O. V., Honchar, O. F., Lesyk, Y. V., Kovalchuk, I. I., & Gutyj, B. V. (2020). Effect of zinc nanoaquacitrate on the biochemical and productive parameters of the organism of rabbits. Regulatory Mechanisms in Biosystems, 11(2), 243–248. doi:10.15421/022036
- Bojko, O.V., Darmohray, L.M., Luchyn, I.S., Honchar, O.F., & Gutyj, B.V. (2020). Specific activity of Sr-90 and Cs-137 in rabbits of various genotypes. Ukrainian Journal of Ecology, 10 (2), 165-169. doi: 10.15421/2020\_80
- Borshch, O.O., Gutyj, B.V., Borshch, O.V., Sobolev, O.I., Chernyuk, S.V., Rudenko, O.P., Kalyn, B.M., Lytvyn, N.A., Savchuk, L.B., Kit, L.P., Nahirniak, T.B., Kropyvka, S.I., & Pundyak, T.O. (2020). Environmental pollution caused by the manure storage. Ukrainian Journal of Ecology, 10(3), 110-114. doi: 10.15421/2020\_142

Campbell, A., Converse, P.E., & Rodgers, W.L. (1976). The Quality of American Life. Russell Sage Foundation. New York.

Constitution of Ukraine: Law of Ukraine. 1996. 254k / 96-VR. Information of the Verkhovna Rada of Ukraine, 30 (in Ukrainian).

Darmohray, L.M., Luchyn, I.S., Gutyj, B.V., Golovach, P.I., Zhelavskyi, M.M., Paskevych, G.A., & Vishchur, V.Y. (2019). Trace elements transformation in young rabbit muscles. Ukrainian Journal of Ecology, 9(4), 616-621

Gorlenko, I.A., Rudenko, L.G., Malyuk, S.N., & Lebed, N.P. (1991). Balanced economic, social and ecological development of the territory (economic and geographical aspects). Kiiv (in Ukrainian).

Grymak, Y., Skoromna, O., Stadnytska, O., Sobolev, O., Gutyj, B., Shalovylo, S., Hachak, Y., Grabovska, O., Bushueva, I., Denys, G., Hudyma, V., Pakholkiv, N., Jarochovich, I., Nahirniak, T., Pavliv, O., Farionik, T., & Bratyuk, V. (2020). Influence of "Thireomagnile" and "Thyrioton" preparations on the antioxidant status of pregnant cows. Ukrainian Journal of Ecology, 10(1), 122-126. doi: 10.15421/2020\_19

Gukalova, I. (2013). The status of the category "quality of life" in geography and its current dynamics in the regions of Ukraine. Ukrainian Geographical Journal, 4, 48-55 (in Ukrainian).

Gukalova, I.V. (2009). Quality of life of the population of Ukraine: socio-geographical conceptualization. Institute of Geography of the National Academy of Sciences of Ukraine. Kyiv (in Ukrainian).

Keles, R. (2012). The Quality of Life and the Environment. Procedia - Social and Behavioral Sciences, 35, 23-32.

Kofonov, K., Potrokhov, O., Hrynevych, N., Zinkovskyi, O., Khomiak, O., Dunaievska, O., Rud, O., Kutsocon, L., Chemerys, V., Gutyj, B., Fijalovych, L., Vavrysevych, J., Todoriuk, V., Leskiv, K., Husar, P., & Khumynets, P. (2020). Changes in the biochemical status of common carp juveniles (Cyprinus carpio L.) exposed to ammonium chloride and potassium phosphate. Ukrainian Journal of Ecology, 10(4), 137-147. doi: 10.15421/2020 181

Kolipiński, J. (1978). Human, economy, environment, space. KPZK-PAN. Warsaw (in Polish).

Lesyk, Y., Ivanytska, A., Kovalchuk, I., Monastyrska, S., Hoivanovych, N., Gutyj, B., Zhelavskyi, M., Hulai, O., Midyk, S., Yakubchak, O., & Poltavchenko,T. (2020). Hematological parameters and content of lipids in tissues of the organism of rabbits according to the silicon connection. Ukrainian Journal of Ecology, 10(1), 30-36. doi: 10.15421/2020\_5

Lisovsky, S.A. (2007). Fundamentals of sustainable (balanced) economic, social, environmental development. Polissya. Zhytomyr (in Ukrainian). Martyshuk, T.V., Gutyj, B.V., Zhelavskyi, M.M., Midyk. S.V., Fedorchenko, A.M., Todoriuk, V.B., Nahirniak, T.B., Kisera, Ya.V., Sus, H.V., Chemerys, V.A., Levkivska, N.D., & Iglitskej, I.I. (2020). Effect of Butaselmevit-Plus on the immune system of piglets during and after weaning. Ukrainian Journal of Ecology, 10(2), 347-352. doi: 10.15421/2020\_106

Mazur, N.P., Fedorovych, V.V., Fedorovych, E.I., Fedorovych, O.V., Bodnar, P.V., Gutyj, B.V., Kuziv, M.I., Kuziv, N.M., Orikhivskyi, T.V., Grabovska, O.S., Denys, H.H., Stakhiv, N.P., Hudyma, V.Yu., & Pakholkiv, N.I. (2020). Effect of morphological and biochemical blood composition on milk yield in Simmental breed cows of different production types. Ukrainian Journal of Ecology, 10(2), 61-67.doi: 10.15421/2020\_110

Measuring the quality of life in Ukraine. Analytical report. (2013). Libanova E. M., Gladun O.M., Lisogor L.S. and others. Kyiv. (in Ukrainian). Morris, M. (1980). The Physical Quality of Life Index (PQLI). Development digest, 18(1), 95-109.

Nozdrina, L.V. (2001). Quality of life in the transition economy of Ukraine. Abstract of the dissertation of the candidate of economic sciences. Lviv (in Ukrainian).

Nugaev, M.A., & Nugaev, R.M. (2003). The quality of life in the works of US sociologists. Sociological Research, 06, 100-105 (in Russian).

On environmental protection: Law of Ukraine. 1991. 1264-XII. Information of the Verkhovna Rada of Ukraine. 41 (in Ukrainian).

Otok, S. (1987). Social geography. PWN. Warsaw (in Polish).

Owsiński, J., & Tarchalski, T. (2008). Measurement of the quality of life. Notes in the frontier of a certain ranking. Scientific Papers of the Faculty of Information Technology Management Techniques of the University of Information Technology and Management "Contemporary Problems of Management", 01, 59-95 (in Polish).

Piven, O.T., Khimych, M.S., Salata, V.Z., Gutyj, B.V., Naidich, O.V., Skrypka, H.A., Koreneva, Z.B., Dvylyuk, I.V., Gorobey, O.M., & Rud, V.O. (2020). Contamination of heavy metals and radionuclides in the honey with different production origin. Ukrainian Journal of Ecology, 10(2), 405-409

Popov, S.I. (1977). The problem of "quality of life" in the modern ideological struggle. Politizdat. Moscow (in Russian).

Problems of social development of large cities (1982). Ed. Yu.A. Suslov, P.N. Lebedev. LSU. Leningrad (in Russian).

Problems of the quality of the urban environment (1989). Sat. scientific. tr. USSR Academy of Sciences, Joint Committee on the UNESCO Program "Human and the Biosphere". Resp. ed . Lappo G., Bochkareva T. Nauka. Moscow (in Russian).

Quality of life in the border area – strengthening of cross-border flows for joint sustainable development and regional planning. (2014). Edited by T. Borys, R. Knippschild. AD REM Publishing House. Jelenia Góra.(in Polish).

Quality of Life Law and Legal Definition. Available from: https://definitions.uslegal.com/q/quality-of-life/.

Siciński, A., & Strzelecki, J. (1976). Lifestyle and the quality of life: a contribution to the problems of social policy. Siciński A. Lifestyle: Concepts and Proposals. PWN. Warsaw (in Polish).

Slivinska, L. G., Shcherbatyy, A. R., Lukashchuk, B. O., & Gutyj, B. V. (2020). The state of antioxidant protection system in cows under the influence of heavy metals. Regulatory Mechanisms in Biosystems, 11(2), 237–242. doi:10.15421/022035

Sobolev, O.I., Gutyj, B.V., Sobolieva, S.V., Borshch, O.O., Nedashkivsky, V.M., Kachan, L.M., Karkach, P.M., Nedashkivska, N.V., Poroshinska, O.A., Stovbetska, L.S., Emelyanenko, A.A., Shmayun, S.S., Guta, Z.A. (2020). Selenium in natural environment and food chains. A Review. Ukrainian Journal of Ecology, 10(4), 148-158

Spiridonov, S. (2010). Indicators of the quality of life and methodology of their formation. Questions of modern science and practice, 10-12(31), 208-223 (in Russian).

Todorov, A.S. (1980). The quality of life. Critical analysis of bourgeois concepts. Moscow: Progress (in Russian).

Topichiev, O.G. (2005). Socio-geographical research: methodology, methods, techniques: Textbook. Astroprint. Odessa (in Ukrainian).

Veblen, T. (2016). The Theory of the Leisure Class. Librocom. Moscow (in Russian).

World Health Organization. Available from: https://www.who.int/.

#### Citation:

Chemerys, V., Kaplenko, H., Kulish, I., Maksym, V., Dadak, O., Kushnir, L., Hrymak, O. (2021). Theoretical aspects of the concept of "quality of life" in the context of environmental safety. *Ukrainian Journal of Ecology, 11*(1), 196-201.

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