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Ecology and sustainable development. New model of economics

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ABSTRACT

The existing economy and its infrastructure is built mainly as a liberal, costly market system, whose main function is to make a profit. In this case, it is necessary to organize a system for the delivery, storage and distribution to the places of consumption of huge quantities of goods and resources. Such a costly model carries a large amount of transaction costs for transport, transshipment, storage, payment of numerous intermediaries, infrastructure operators and various financial agents. Today, the current economy of rampant growth is changing to a low-cost, actively-adaptive intellectual (Smart) “green digital economy” based on digital information technologies, which is the basis for sustainable development. as the basis for maintaining environmental, socio-economic and political stability in the world community within Fourth Industrial Revolution Economy. A new model of the world economy should be a circular economy, which, based on energy and resource-saving low-volume technologies and network digital platform solutions, will ensure sustainable development, taking into account all environmental principles of environmental protection.

Keywords: Ecology, Sustainable development, Digital economy, Energy, Smart systems, Ring economy.

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Introduction

What is Economics? Many people ask themselves this sacramental question today. Seems to be clear. It is a complex system designed to produce various life-supporting goods and services from natural resources for the population. However, if you think about it, it's not that simple. Note that in today's market capitalist mode of production, the target function of production is not profit for people, but profit. The basis of this way of organizing the economy is, as Adam Smith wrote, not the benevolence of the producer, but the observance of their own interests, that is, self-interest. That is, what does not make a profit, it makes no sense to do this, because the main indicator is profit-money. Aristotle also spoke of two different ways of managing. One is chrematistics-profit associated with making a profit, the second is Economics - (from gr. οἶκος – home and νόμος - to rule), services for people's homes. From this first Greek word comes the term ecology-the science of our common home of the

natural environment. In this regard, it is of interest how to ensure sustainable development of territories in the conditions of the resource crisis caused by the existing situation in the world economy, operating on the linear principle of resource extraction-sold - used-thrown away, sent to the landfill. At the same time, the more resources spent, produced, sold, and thrown away, the better, since the greater the profit. And the fact that this scheme is energy and resource – consuming and generates a huge amount of waste-garbage, this is of little concern to the participants of economic activity, especially since the disposal of useless, often usable things, brings, as experience shows, a huge profit. So the main appeal to consumers is to Buy and consume, even if it doesn't make any sense.

Main part

The environment surrounding a person is a natural ecosystem, outside of which he cannot live, since it is initially an inseparable part of its biocenosis.

We must understand that man is not a conqueror of nature, but a part of it, built into natural cycles, as an element that should not destroy or plunder resources, but uses them as a commodity credit that must be returned. We need to realize this and build our economy in accordance with this principle. However, the intensive development of the world economy in the last century has come into conflict with these principles and created a huge burden on the natural environment and its resources. It should be noted that globalization and related crisis phenomena are derived from the modern civilizational model, which is based on unrestrained consumption. Under these conditions, the anthropogenic load on the environment exceeded all permissible limits. As a result, it can degrade and become unsuitable for further providing the growing population of the Earth with the resources necessary to support human life.

The existing economy and its infrastructure, and not only, is built mainly as a liberal vertically integrated centralized cost-based market system, the purpose of which is to make a profit. Production of goods is organized as follows: it is necessary to get resources and competencies, deliver them to specialized centers, process them there, get the product, and then use the infrastructure to deliver it to the consumer, who can sometimes be thousands of kilometers away from the place of production. At the same time, it is necessary to organize a system of delivery, storage and distribution of huge quantities of goods and resources to places of consumption. This cost model carries a large amount of transaction costs for transport, transshipment, storage, payment of numerous intermediaries, infrastructure operators and various financial agents. Moreover, this does not create any added value, for it generates a large amount of unsecured profit, creates a fictitious gross product in the form of financial bubbles of unsecured assets that exceed the real world economy in various estimates from 10 to 15 times. This also leads to a huge stratification of the population by income. The main part of the population is poor, and a handful of so-called owners, appropriating the results of labor of workers, get rich.

So: the Global Gross domestic product (GDP) at current prices was in 2019 84,740.32 billion \$ (<https://www.statista.com>), but “behind the average numbers there is a large inequality. More than half of global wealth (50,8%) are in the 1% super-rich, over three-quarters (77,7%) – 5% richest and the 10% wealthiest accumulate 89,1% of global wealth – was about the same proportion and in the begin-

ning of the century, the report says. Wealth in excess of \$50 million (net of debt) have 140 900 people, including 52% of the U.S. and Canada, 21% – Europe 18% – developing countries”. According to Carlos Barria/Reuters: Half of the world’s adult population has only 1% of global wealth. In this issue, Russia is not far behind the global trend, as Olga Kuvshinova wrote in *Vedomosti* on November 23, 2016: 10% of Russians account for almost 90% of the country’s national wealth. Klaus Schwab in Davos in 2019 said that the biggest threat to economic stability is an imbalance in the world (<https://www.businessinsider.com/the-world-economic-forum-founder-shares-the-biggest-threat-to-the-economy-davos-2019-1>).

The results of a market-based liberal economy are often negative. In all post-Soviet States, with the exception of the Baltic States, which are subsidized by the European Union until 2020, the standard of living of the majority of the population has fallen and an interesting class of working beggars has emerged, not to mention pensioners. Another illustrative example is the reform of RAO UES of Russia, which promised to modernize the energy sector and reduce tariffs as a result of declared market and competitive relations. So what? Rampant growth in tariffs, investment at the expense of consumers, increased losses, corruption, and monopolism. For beautiful words about prosperity, the market is cruel and at any opportunity to get more than a profit, there are violations of all written and not written rules and morals.

You should always remember that the main factor of growth in the market system is profit-money, which is in conflict with many moral and aesthetic norms and universal values, since market relations often lead to wasteful attitude to resources. “The more I sell, the more resources I spend, the greater the profit.” This business thesis conflicts with the ideas of saving the environment and sustainable development. The market is good for satisfying private needs, but solving the needs of society is in conflict with the interests of capital. In this regard, we need a self-regulatory mechanism for evaluating efficiency, with appropriate methods of regulation, preferably self-regulation, which should motivate the reduction of resource costs for obtaining goods and services. For market fundamentalism, According to George Soros, is a much greater danger for an open global society than communism. Therefore, the community of free citizens-the “open society” - must control and resolve all problems that arise

in the markets, in the interests of people, since any sustainable development is necessary to ensure comfortable living conditions for current and future generations.

The model of life built by Western civilization sets the goal of unrestrained, sometimes senseless consumption for every person and community. And often the needs that are not necessary for maintaining life arise in the environment of people. And no one can answer the question: Why is this necessary? What was good yesterday is not the same today. Quite decent items that are suitable for consumption go to the landfill or as second-hand to those who do not yet know that these things are no longer suitable for other people living in another dimension. The Western liberal civilized model of behavior and satisfaction of life needs is based on unrestrained, uncontrolled consumption and, often not clear to many, glamorous behavior. This requires the removal from the natural environment of huge amounts of various natural materials, the creation of which humanity has nothing to do, and turning them into hostile to the surrounding world and all living things, including human trash, for the production of which an increasing amount of energy resources is needed. Basically, this is a hydrocarbon fuel that is burned in the furnaces of power plants, motor vehicles, heating systems, and the like.

All this leads to the carbonation of the natural environment, the greenhouse effect, an increase in the global average temperature and, as a result, to global climate change, which leads to numerous climate catastrophes today, with great loss of life and material losses. In 2018, an IPCC (Intergovernmental Panel on Climate Change) report indicated that the planet is about 1.0 °C warmer than pre-industrial levels and is likely to reach 1.5 °C by 2030, and in June 2019, the UN gave a global assessment of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), which States that the rate of animal extinction is accelerating and up to 1 million species are at risk of extinction. Both UN reports indicate that humanity is actually facing a man-made environmental disaster.

The above-mentioned trash is not included in any natural cycles, it is not disposed of by the natural one. It makes the world around us uninhabitable. There are still intact, undisturbed places that are suitable for natural life. There are fewer of them. The life of hotel personalities and their groups has become a pursuit of ghostly values: everything

needs more, more and more. More money, more houses, more yachts, more rags, more cars, and so on. It's not clear why. All this requires increasing amounts of non-renewable material and energy resources, which leads to their depletion, and unrestrained consumption generates a huge amount of waste, which leads to pollution of the natural environment due to the huge amount of waste that is not disposed of by nature. So only: millions of tons of plastic waste are drifting on the surface of the world's oceans, and, according to experts, 80% of this garbage got into the ocean from land and only 20% was dumped or washed away from ships. Garbage harms more than 250 species of marine animals and birds and releases toxic substances into the water. An interesting fact: garbage thrown into the ocean forms the most real floating continents, the most famous of which is the Pacific garbage spot, which can be seen even from the ISS (International Space Station of NASA). This is a giant collection of garbage in the North Pacific ocean. The area of the spot, according to the most optimistic estimates, is at least 700 thousand square kilometers.

All this is accompanied by a loss of spirituality and faith. If we do not take urgent measures to change the paradigm of the world economy, we will soon have to decide whether to be or not to be. But few people think about it. Most are engaged in extracting funds to the detriment of health, mental and physical, to gain access to unnecessary garbage. And we must not forget and firmly remember that where we all go sooner or later, you can not take anything with you.

How should we act to protect the planet from destruction as a result of an absurd consumer society, from this flood of unnecessary items and services? Solving the problem of saving the planet and, in fact, humanity from destruction is one of the most important tasks of reforming the entire system of life on earth in the 21st century. The last meetings of the world economic forum in Davos were dedicated to this. The world community and individual representatives of big business realized the essence of the impending disaster. We need a new model of development that provides current and future generations with all the necessary resources for life.

Such a model of the world economy in the 21st century should become a circular economy, which, based on energy and resource-saving low-volume technologies and network platform solutions, will allow: significantly reduce transaction costs, create compact green settlements with local and decen-

tralized systems to provide the population with the necessary spiritual, material and energy resources for sustainable living, taking into account all environmental principles of environmental protection. The world is entering a new technological era, when horizontal links between market actors (sources and consumers of resources) directly without a single center will change the entire system of life on the basis of the three e principle: Ecology, Economy, Energy (Huzmiev). At the same time, everyone is equal in the network, regardless of the volume of the resource being processed. Each subject of the network itself decides to act independently or transfer its powers under certain conditions to a third party to carry out operational activities for the exchange of resources.

Almost a new economy is an economy with a network architecture with free exchange of all resources between nodes (cells) of the network, which can have the properties of generating, consuming, storing, and transferring resources. At the same time, monitoring, management and decision – making systems for life support should be based on actively adaptive intelligent digital technologies (smart systems). The purpose of such an economy is not profit that destroys the natural environment, but sustainable development that provides current and future generations of people living on earth with the necessary information, material, energy resources and food to maintain a healthy lifestyle and protect the environment, taking into account the region of residence and moral attitudes of a particular ethnic group. This is a growth economy that ensures sustainable development and preservation of the earth's biosphere, with a reduction in the level of consumption of all resources and their restoration.

Today, there is a rapid exponential change in the economic structure within the framework of the fourth industrial revolution of Economy [4] in our opinion, this is a resource-saving system of economic growth based on intelligent active-adaptive automated digital management of all life-support entities in real time, which are combined with the use of decentralized network structures with vertical and horizontal connections between the elements of the system with closed technologies of production, consumption and disposal of consumer items on the basis of decentralized, decarbonized, digital energy. At the same time, all elements of the economy and their associations in the form of cyber-physical systems are displayed as virtual models on digital platforms using the Internet of things and services.

Note that the Fourth Industrial Revolution) - a predicted event, the mass introduction of cyber-physical systems in production (industry 4.0) [1], serving human needs, including life, work and leisure. Changes will cover a variety of aspects of life: the labor market, the living environment, political systems, technological structure, human identity, and others [2]. The fourth industrial revolution carries risks of increasing instability and possible collapse of the world system [3]. Humanity is on the edge of a new technological revolution that will radically change the way we live, work and relate to each other, Klaus Schwab noted in Davos in 2017, while the world is waiting for challenges and risks that can lead the environment along with humanity to the death and collapse of everything conceived. The digital world of a new technological order is coming, full of dangers and uncertainty.

It is necessary to realize that further economic growth based on unrestrained consumption of energy and resources cannot be sustainable, due to resource constraints due to the finite size of the planet and the growth of the population. This is why the current economy of unrestrained growth is being replaced by a low-cost active-adaptive intelligent (Smart) “green economy” based on digital information technologies, or as it is also called digital economy 4.0, which is the basis of sustainable development. This means: meeting the needs of current and future generations of people with a normalized amount of life-supporting resources for all categories of consumers, sufficient to maintain a healthy lifestyle and efficiency while reducing the risks of environmental degradation, as a basis for maintaining environmental, socio-economic and political stability in the world community on the basis of the digital economy 4.0 [5, 6]. After all, this is a question of survival, which is not yet realized by the majority in our consumer society.

Conclusion

Humanity will be able to survive in the 21st century only if, in the context of the new globalization, the first place will be put not the profits of individual individuals, transnational financial groups and oligarchs, but the needs of any person living on earth to ensure an economically and environmentally sustainable future. These include modern digital information systems, renewable energy sources, local production of goods and services, green farming, socially oriented public relations, democratization

and election of government bodies and the judicial system, and security.

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