

AN ECO-FRIENDLY ECONOMY AS A GOAL FOR LONG-TERM DEVELOPMENT**Shavishvili N.***Doctor of Geography (Ph. D.),**Research associate of the Institute of Hydrometeorology of Georgian Technical University**Tbilisi, Georgia*<https://doi.org/10.5281/zenodo.7945132>**Abstract**

The article assesses the current state of interaction between the economy and ecology, identifies the key problems in this system, and outlines promising approaches to solving these problems. At present, the economic system is regulated by the relationship between man and things. This does not contribute to the regulation of the harmonious relationship between nature and man.

Keywords: Harmony, natural process, additional costs, environmental damage, environmental productivity, ecological economics.

Introduction

Negative natural phenomena in general (climate change, pole shift, and others) and in particular (greenhouse effect, ozone layer destruction, pollution of seas and oceans) go beyond the traditional natural process, breaking the organic connection, the natural part of a person from its carrier. Attempts to close the consequences of this gap cause additional costs. Whatever these costs, they do not compensate for all invisible natural losses. Under these conditions, invisible costs grow faster than direct ones - human health deteriorates, productivity decreases, costs for rescue measures for environmental protection, cleanup of affected areas and others increase, not to mention priceless human lives. If this cost were taken into account, one would notice that by making some sacrifices today, we could not only ensure a long and stable existence but also reduce its cost.

Consider the economies of India and China, which are very strongly tied to their main consumers: the United States, the countries of Southeast Asia, and, to a large extent, Europe. [1]

In all likelihood, the economic and political problems of the United States and Europe, the approach to solving which was wrong, will intensify in 2012. The likelihood of a recession is growing, and the troubled countries of the Eurozone will not be able to keep their debts under control without a resumption of economic recovery in them. In the US, the "repair" of the banking system after the 2008 crisis was not enough to cure the economy. And here it is important to how the economies of other countries will behave in this situation [2].

A slowdown in the American economy will inevitably lead to a slowdown in the economies of these countries. At the same time, it is extremely doubtful that over the next quarter of a century, domestic demand, the pace of economic development in India and China, and among their neighbors in the region, will reach a level that can compensate for the decline in demand from developed countries. This circumstance indicates the fragility of not only the "Indochinese" factor but also the fragility of the high rates of their development in all developing countries [3].

Policy

What will happen to the Russian economy shortly? Many analysts point out that factors such as the debt crisis in the Eurozone, which is fraught with a complete plunge of the world economy into recession, as well as political instability and pre-election populism in Russia, can hold back economic growth [4].

Even greater uncertainty is fraught with global geopolitics. To date, there are several very serious geopolitical challenges, such as Islamic radicalism, imperial ambitions of some countries, etc., which do not allow us to accurately assess not only the degree but also the direction of the impact of this factor [1].

Looking back from 2008 to the present, no party has shown a willingness to admit what the mistakes were or to formulate a program that would name the fundamental problems. Even players in the US are noticing that politicians are not up to the task. Just like in the 90s, investors suffered from their endless pre-election euphoria. Creation of new jobs, reduction of budgetary debt, cuts in social programs, etc. [5]. None of the countries proposed a fight against inequality, a plan for economic restructuring, especially the restructuring of the fuel and energy balance, and how oil and other exhaustible raw materials should be valued.

Energy

OPEC countries are still the main players in the oil market. They can increase their profits by limiting oil production. To what extent can oil prices rise in this case? It is known that the price at which the benefit is produced reaches its maximum depends on various factors, including the elasticity of demand, and the elasticity of supply from non-OPEC countries. High oil prices hastened the global recession, which eventually led to a decline in oil demand and a shift to alternative forms of energy.

Given the ever-increasing pace of scientific and technological progress, it can be assumed that in 20-30 years it will still be possible to master the process of thermonuclear fusion. In this case, all talk about the future of energy, not to mention the prices for hydrocarbons, becomes meaningless, because humanity will become the owner of a practically unlimited source of energy [6].

However, it is also possible that the use of a thermonuclear reaction will fail in the coming decades. This circumstance will be able to prolong the life of traditional energy sources for some time, but not eliminate environmental problems [7].

Ecology

All of these factors of development or depression fade before a general natural catastrophe that accumulates energy throughout the entire period of human existence. And if at the beginning of the development of civilization and in the subsequent period until the middle of the 20th century, this crisis was not noticeable, then, starting from the middle of the 20th century, it gradually began to be felt not only by Man and Production but also by Nature. The accelerator of the onset of the Natural crisis is the Man himself. But for the most part, it acts on nature not directly, but indirectly, through the increase in Production, the noosphere, accelerating natural and negative processes.

It is necessary to harmonize the actions of the noosphere with Nature. Do people have the right to evaluate the environment only by economic means or proceed from the term "deep ecology" to show that Nature also has a value independent of human interests? Then another question arises: what is the foundation of the environment and how to assess it? How to determine the parameters of the value of nature?

As far as economic valuation is concerned, it is closely related to people's preferences. It is known that the economic evaluation of natural capital cannot provide an objective assessment for economic management. But there is a danger: what is not subject to assessment can be assessed as insignificant, and this leads to the degradation of the resource. For this not to take place in life practice, it is necessary to determine a socially significant goal.

Prospects for Ecological Economics

The timing of the transition to the use of thermonuclear fusion is inscrutable, and with it, the possible directions of the ecological, economic, and sociopolitical development of our world are completely inscrutable. This, in turn, means that whatever the forecasts of world prices for consumed natural resources in the future, the probability of their realization in the next quarter of a century will be approximately the same. And if consumption rates in developing countries continue to grow as rapidly as they did in developed countries in the middle of the 20th century, then the onset of a transitional crisis is inevitable in two or three decades.

If the change in Nature is based on the fact - the excessive active household activity of a Human, then we must find ways to solve this problem by optimizing the impact on the environment, building a behavior model that maintains a balance between the ability of nature to restore and human activity, which is more and more strongly intrudes into the natural process of development of nature, both in connection with the growth of the population and with the growth of its consumption per capita.

Without taking into account the feedback mechanism, this phenomenon is difficult to understand. Population growth leads to an increase in the demand for agricultural products. Since land resources are limited

(unlike labor), with population growth there is a need for innovation, which humanity can implement. If not based on the reverse spiral hypothesis, which, unlike the forced innovation hypothesis, assumes positive feedback, growing consumption only increases environmental degradation. In real life, both hypotheses can change ownership of natural resources.

These visible problems are closely related to the invisible negative consequences of economic activity: the presence of electromagnetic waves in the high-voltage power lines, increased background radiation near nuclear power plants, increased noise, fumes of toxic substances, and other processes that negatively affect human health. In certain territories. Negative processes will accelerate as in a chain reaction, then it will be too late to fight global negative processes in the environment.

The question arises whether economic development is in conflict with the interests of the environment, or has the process of reconciliation already begun. One group of scientists believes that progress has been made in this direction, while others, on the contrary, believe that the current path of human development is environmentally unsustainable, due to the above reasons. In this case, a second question arises. Is there an ultimate optimum between human production activities and the preservation of the environment? Is there a limit to the excessive desire to improve human well-being, after which the increase in production, and its results will be "eaten up", compensated by the costs of restoring human health from environmental pollution and restoring a degraded environment?

There is an optimum, but in the current socio-economic situation, within the framework of the current economic system, the balance between production and the environment is disturbed in many areas. The violation follows from the very principle of the market system of free exchange and productivism, as well as from the conviction of many scientists that there is no alternative to the market. The search for new approaches is constrained by the conservatism of thinking.

The neoliberal theory is considered by its representatives to be the only true scientific theory. In this way, it shifts into the realm of beliefs and opinions in the social sphere, rejecting the socio-ecological, socio-economic, environmental-economic, and socio-ecological-economic theories of individual development.

At the same time, it is argued that the market is neutral to nature and, thus, is the only arbiter of the ecological situation. This neutrality in the field of regulation of production processes that are harmful to Man and Nature turns into a negative moment for the market system itself, causing huge material damage. The solution to the problem often lies in the field of ethics, touching on the issues of which, we come to understand that the economy alone can no longer answer the question of the prevalence of values. There are other types of values as well. An economy is only a tool, and only values give meaning to life. These values are numerous and sometimes invisible, and economic policy leads to two things: the superiority of politics over economics and the competition of values. Giving preference to human values does not mean not taking into account the

poverty of the population, and the possibility of reducing it, which, in the end, leads to a person turning to himself, since humanity always faces its future, and social choices [8].

What a person already possesses and can lose is valued more than what he does not yet have, i.e. losses are valued higher than possible gains, which is known as a negative risk attitude. It is necessary to take into account the influence of the moral factor. If the party causing it pays for the damage, then with the increase in damage, the desire to accept compensation increases (compensation includes lost profits and sanctions).

It is possible that ignorance of the state of the environment and the levels of use of natural resources does not allow one to achieve openness, transparency, and manageability of the natural process, as well as to prove that a properly developed environmental policy is not in the field of costs and results, but in the field of definition and preference, other values. [9]

The ongoing economic measures aimed at compensating for environmental losses do not completely solve the problem of environmental protection and nature management, as well as the "principle of responsibility". The fact is that the true price of environmental destruction, its pollution is much higher than it seems, and therefore the true price is very rarely taken into account. In addition, many scientists who use the conditional survey method for assessing natural goods believe that respondents indicate large amounts of the loss of the good - the amount that they would be willing to pay for the preservation of the good.

Thus, losses are valued higher than possible gains. Others believe that the differences can be explained using a market economy, for example, in the absence of good substitutes - this is a lost profit. But this is far from being the case since the value of an individual is not the exclusive value of the market. The stake is human life, irreversible processes in the natural environment, where each biological species performs the function of regulation and depends on all other species. All this is in no way reflected in the market, which gives value to natural wealth only when a particular species becomes rare, which means it is too late to save both it and the natural balance associated with it [10].

Benefit-cost analysis to evaluate regulatory action to protect human life is immoral since all citizens have the right to be free from the harm caused by pollution. Therefore, economic activity should not be an end in itself but should become a means of realizing the true values of humanity - the coexistence of Man and Nature in community and harmony. Among the most important factors that can bring us closer to an optimal balance between the economy and the environment are "hard budget constraints", as well as the end of subsidies for the extraction and use of natural resources (energy, minerals, or water resources), the introduction of hard limits - motives for emissions of harmful substances into the atmosphere, water, soil. [11]

Unfortunately, modern economic theories continue to isolate and glorify the economy, separating it from other areas of human activity and nature. They operate the economy outside its context and do not take

into account qualitative considerations, they only accept quantitative ones: the greater the volume of products, the higher the human well-being.

But that was only one and a half to two centuries ago. This, finally, perhaps holds for poor countries at present. For developed countries, where economic growth is achieved through the destruction of human life and the natural environment, this does not constitute development. We must find a new approach to economics that can take into account the interconnection of different areas in such a complex modern world [12].

We need a new, well-considered environmental policy that takes into account the equal interests of all components of the system: "Nature - Man - Production", which would have the principle of payment for nature management and pollution of the environment by emissions and waste from economic or other anthropogenic activities, as well as considered the very value of the entire system and its components. The successful implementation of this combined principle of payment requires the introduction of a comprehensive socio-ecological and economic accounting of the quality and assessment of the natural environment, the establishment of a clear system of property rights for natural resources, the use of economic and spiritual incentives and sanctions that contribute to environmental conservation and at the same time enabling the dynamic development of both the manufacturing sector and services. [13]

In addition, it becomes obvious that the issues of nature management and environmental protection are not isolated in the system of national economies. They are not limited to the prevention and elimination of harmful anthropogenic impacts on nature, since this is a costly and environmentally depleting approach, leading to the further use of the extensive development of traditional technologies, which not only do not reduce the number of harmful emissions and waste but also increase disruption of existing ecosystems. The authors think of those who believe that funds allocated for environmental protection should be considered not only as costs but also as investments that generate income in the form of natural capital. Consequently, environmental protection and related activities should be considered as an integral environmental component of the development of countries, along with social and economic ones.

And this component is closely connected not only with energy and environmental conservation and related technologies, understanding of the high value (and limitation) of many natural resources and environmental processes, and their sustainable use but also with the formation of an environmental outlook in society, with a sense of duty both to living generations and to future generations. In many cases, if a person does not comply with any formal or informal rules, he begins to experience negative emotions from what he should have done or not done. Such emotions are called conscience, a sense of guilt, or a sense of duty... If a person is capable of feeling guilty, he can comply with the rules of any ethical system (religious, communist, liberal, etc.), otherwise, no ethics will be for it is significant in principle [14].

Conclusion

Thus, an effective economic and financial policy in the field of nature management and environmental protection, although it is part of the socio-environmental and economic policy, can positively affect the qualitative change in the structure of the entire economy of countries that are still focused on mining and exports of natural raw materials, which are often considered to be in abundance, but unfortunately, bring a temporary maximum economic effect.

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