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SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL ECONOMICS

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Annotation: The following article, based on deep and scholarly analysis, reflects on the environmental factor as one of the most important conditions for achieving sustainable socio-economic development. In the process, the teachings of ancient economists were studied, their economic views were analyzed in relation to this topic, and within the scope of research, relevant issues were identified. As a general conclusion, several proposals and solutions were presented to address these problems.

Keywords: sustainable development, history of economic thought, environmental factor, progress, goal, task

Introduction

By the 20th century, the "dark side" of the Industrial Revolution pollution, climate change, and the decline of biological diversity had become a serious global threat. At this point, the concept of "sustainable development" marked a new stage in human thought. In essence, this idea represents a return to the principles of humanism and natural balance found in ancient economic teachings, reinterpreting them in the context of modern realities.

The concept of sustainable development envisions harmonizing economic growth with environmental safety, social justice, and the rational use of resources. In this regard, the emergence of environmental economics became an important milestone. It calls for assessing the ecological footprints resulting from human activity through economic analysis criteria and recognizing natural capital as an integral part of a nation's wealth.

The rise of environmental economics is directly connected with the evolution of economic thought. This process can be examined through the example of the Republic of Uzbekistan. First and foremost, this process has been enshrined in the country's legislative and regulatory framework. In particular, the legislation of the Republic of Uzbekistan defines specific goals and objectives for sustainable development. The Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 83, dated February 21, 2022, "On Additional Measures to Accelerate the Implementation of National Goals and Objectives in the Field of Sustainable Development for the Period up to 2030," sets out a number of key tasks and priorities to be achieved in this field.

Literature review

Sh. Sh. Shodmonov and U. V. G'afurov, in their textbooks on economic theory, elaborated on the initial concepts of sustainable development. According to the authors, achieving sustainable economic growth first requires understanding the stages of development. They argue that economic stability is the result of a historical process in which various stages are interlinked in a chain of evolutionary methods. In their work, the stages of development are approached from several perspectives: the historical-formational approach, the level of cultural or civilizational progress, the level of technical and technological advancement, and changes in socio-economic structures.

Later, John Stuart Mill, in his work *Principles of Political Economy*, introduced the idea of a "stationary state economy." He emphasized that economic growth cannot continue indefinitely and that, at a certain stage, humanity should focus on qualitative improvement rather than quantitative expansion. This perspective laid the ideological foundation for the concept of

environmental economics. Through this idea, Mill highlighted that humanity cannot always experience continuous development; rather, by emphasizing quality in socio-economic and production spheres, it is possible to achieve both environmental and sustainable economic progress.

Furthermore, foreign scholars have also presented their views on environmental economics in their original works. Economists such as Herman Daly and Robert Costanza distinguished the theory of environmental economics from neoclassical economic thought. Costanza, in particular, developed the concept of "natural capital," presenting ecosystems as a fundamental factor in human well-being. Their research laid the theoretical foundation for today's environmental policies and "green economy" strategies.

Research methodology

In this scientific article, empirical and comparative methods were used to conduct the analysis. The comparative method was applied to examine and contrast historical economic views with modern economic perspectives. Through the empirical method, the study was explained and supported using theoretical foundations.

Analysis and resuts

The ideas of sustainable development and environmental economics have become central issues in modern economic thought. Looking back at the history of economic theories, we can observe that human economic activity has evolved through several stages — from mere survival, to wealth accumulation, and finally, to ensuring sustainability. This evolution reflects not only the transformation of production methods but also the growth of human consciousness and a deeper sense of responsibility toward nature.

The global environmental crises of the 1970s including air and water pollution, deforestation, and climate change forced humanity to reconsider the quality and purpose of economic growth. Although the rapid industrial expansion of the Industrial Revolution brought short-term profits, it disrupted ecological balance in the long run. As a result, the depletion of natural resources, environmental degradation, and growing social inequality prompted a fundamental shift in economic policy toward a more sustainable and responsible development model.

The analyses show that the concept of sustainable development arises from the need to evaluate economic growth not only in quantitative but also in qualitative terms. In other words, an increase in a country's Gross Domestic Product (GDP) does not necessarily signify prosperity if that growth harms the environment; in such a case, it represents not an economic achievement, but a loss for future generations. Therefore, environmental economics analyzes economic activity based on three main pillars: economic efficiency, social equity, and environmental sustainability.

"Global research demonstrates that countries consistently implementing sustainable development policies have succeeded in preserving ecological balance and improving energy efficiency without compromising economic growth. Nations such as Sweden, Finland, Denmark, and Japan have placed the "green economy" model at the core of their economic policies. They have achieved sustainable progress through the extensive use of renewable energy sources, waste recycling, and the adoption of production systems based on the "zero emissions" principle."[1]

Developing countries, including "Uzbekistan, are also gradually undertaking reforms in this direction. In recent years, significant initiatives have been introduced within the framework of the *Green Energy Strategy*, the *Law on Environmental Protection*, and the *Sustainable Development Goals up to 2030*. For example, the construction of solar and wind power plants,

[1] United Nations. *Transforming Our World: The 2030 Agenda for Sustainable Development.* New York: United Nations, 2015.

the expansion of waste recycling systems, and the introduction of water-saving technologies all demonstrate Uzbekistan's commitment to transitioning toward an environmentally sustainable economy."[2]

From the perspective of economic theory, the analysis indicates that humanity is currently undergoing a transition from the neoclassical economy to the environmental economy. The traditional approach was based on the belief that "the market always regulates itself," but under modern conditions, this theory no longer functions effectively. This is because environmental issues represent externalities—problems that market mechanisms alone cannot resolve. Therefore, environmental economics requires an integrated approach that combines state policy, international cooperation, and civic responsibility.

The results of the analysis show that environmental economics demands not only an economic shift but also a transformation in cultural and moral consciousness. It promotes a new mindset that redefines economic activity as a "culture of living in harmony with nature." Human well-being, therefore, is determined not solely by economic indicators but also by a healthy environment, clean air, safe water, and biodiversity.

At the same time, the concept of a circular economy is gaining increasing importance as a new model of economic growth. In this model, waste is reintroduced into the production process as a resource, while the use of natural resources is based on the principle of being "limited but rational." Thus, environmental economics guides humanity from a "consumer society" toward a "responsible society."

Based on the above analyses, the following conclusions can be drawn:

— The idea of sustainable development is the result of humanity's economic and moral evolution; it harmonizes economic interests with ecological and social values.

— Environmental economics is a logical continuation of traditional economic theories, reassessing natural resources as the foundation of human well-being.

— State policies, particularly Uzbekistan's initiatives on "green energy" and "sustainable development," represent the practical embodiment of the transition toward an environmental economy.

— Economic stability is reflected not only in financial indicators but also in the harmony between natural resources, ecological balance, and human health.

— The economy of the future should be based not on "overproduction" but on "rational utilization," which can be regarded as the highest stage in the history of economic thought.

Thus, sustainable development and environmental economics have ushered in a new and responsible era in the history of human economic evolution. This approach encourages humanity to perceive itself not as the master of nature, but as an integral part of it, and to shape economic progress in harmony with the natural environment.

A summary table reflecting the findings of the analysis on sustainable development and environmental economics can be presented as follows:

Stable development And ecological economy ideas formation stages .

Table 1.[3]

Period / Stage	House economic idea	Leader Scientists / Sources	Ecological approaches place	Practical results or consequences

[2] World Bank. *World Development Report 2020: Trade for Development in the Era of Global Value Chains.* Washington, DC: World Bank, 2020.

[3] Sh.Sh. Shodmonov , Yu.V. Gafurov *" Economy " Textbook "Theory of Science and Technology"* , Tashkent: - "Science and technologies » - 2005 .

Ancient period (ancient) period – 16th century	*Economy is art With harmonious live art .*	*Aristotle , Xenophon , Confucius*	*Human And nature between natural balance necessity emphasized .*	*The concept of " economy " appearance nature from resources reasonable use idea previously pushed .*
18th-19th centuries (classics) economic teachings period)	*For free market , competition , growth And benefit ideas priority .*	*Adam Smith, David Ricardo , T. Malthus , J.S. Mill*	*Malthus resources limited , while Mill stable economic situation necessity said .*	*Economic height increased , but environmental problems for reasons to the side left .*
20th century (Samnoat) revolution ecological crisis period)	*Unlimited working release And technician progress .*	*J. Keynes , neoclassicist school representatives*	*Ecological consequences feel it started naturally resources decreased .*	*Pollution , climate change , resource shortage increased .*
1970-1990 (stable) development concept formation)	*Economic height ecological safety With harmonization .*	*D. Meadows (Growth boundaries "), Club of Rome , H. Daly*	*Stable development theory formed , ecological economy appearance it was .*	*" Our general Our Future " (1987) report stable development official described .*
21st century (Modern ecological economy period)	*" Green " economy , " circulation" economy , zero waste " ideas .*	*H. Daly, R. Costanza, J. Sachs, A. Sen, J. Stiglitz*	*Human well-being ecological balance through give idea basic on principle became .*	*Again recovery energy , environment policy and " green" technologies " current is being done .*
Uzbekistan in the example (2017–2025)	*Stable economic " green " growth with " energy " harmonization .*	*Uzbekistan Republic government , UN programs*	*" Green " energy strategy , sustainable development development goals – 2030 » increases .*	*Sun And wind electricity stations , waste again Job projects on the road was set .*

As seen from the table above, the ideas of sustainable development and environmental economics did not emerge overnight but are the result of a long historical evolution of human thought. Each era shaped its economic ideas based on its specific economic conditions,

technological capabilities, and social needs. However, at the core of all these ideas lay one enduring principle — that humanity must live in harmony with nature.

In ancient times, the essence of economics was explained through the concept of "living in accordance with the laws of nature." Philosophers such as Aristotle and Xenophon, even in their time, sought to understand the limits and proper measure of human activity. For them, economics was not merely about creating wealth, but rather the art of organizing life correctly. Hence, ecological harmony was inherently regarded as a natural value in their worldview.

By the 18th–19th centuries, a new stage in economic thought began. Classical economists such as Adam Smith and David Ricardo viewed economic growth, profit, and competition as the primary objectives. During this period, the Industrial Revolution intensified, and production volumes increased dramatically. However, the cautionary ideas of Thomas Malthus — who emphasized that "resources are limited" — and John Stuart Mill's concept of a "stationary state economy" became the theoretical foundations of today's environmental economics. Their works were among the first to seriously address the limits of economic activity.

By the 20th century, humanity's excessive focus on technological advancement and industrial expansion led to the perception of nature as an "infinite resource" within the economic process. However, this approach soon produced negative consequences: air pollution, climate change, and the depletion of water and land resources became severe global problems. During this time, economists and ecologists began analyzing the extent of environmental damage caused by human activities. It was in this context that the Club of Rome's report *"The Limits to Growth"* provided the first scientific justification for the necessity of sustainable development.

Since the 1970s, the term "environmental economics" has emerged as an independent scientific discipline. Scholars such as Herman Daly, Robert Costanza, and others emphasized the necessity of considering environmental factors when assessing the quality of economic growth. According to them, the economy is not merely a "circulation of money," but a system of "circulation of energy and resources." Consequently, the artificial boundary between economics and ecology gradually began to dissolve.

By the 21st century, these ideas had risen to the level of global policy. Concepts such as the "green economy," "circular economy," and "zero-waste production" have become not just theoretical notions but the foundation of the economic strategies of developed nations. For instance, in the Scandinavian countries, a significant portion of energy is derived from renewable sources. This represents not only an environmental initiative but also a strategic approach to ensuring long-term economic stability.

In the case of Uzbekistan, the idea of sustainable development has, in recent years, taken on a practical dimension. The implementation of green energy projects, the construction of solar and wind power plants, the expansion of waste recycling systems, and the introduction of water-saving technologies all demonstrate that the principles of environmental economics are being actively applied in practice. Although this process is ongoing, each step represents a new stage in the evolution of economic thought.

Thus, today's environmental economics is not only a new economic model but also a new stage in human civilization — the most conscious and responsible phase in the history of economic thought.

As mentioned earlier, several key tasks related to this scientific topic are outlined in the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 83, dated February 21, 2022, "On Additional Measures to Accelerate the Implementation of National Goals and Objectives in the Field of Sustainable Development for the Period up to 2030." Below is a table summarizing the sections of this document that are relevant to this research topic.

By 2030 during the period stable development in the field national target And tasks .

Table 2.[4]

Goal 9. ***Stable infrastructure create , comprehensive And stable industrialization And towards innovation help***

National tasks	**Responsible performers**	**Expert groups**
Task 9.1 . Economic development And People well-being support for this purpose high quality , reliability , stability And stable infrastructure , that is including regional And cross-border infrastructure development in which All For cheap And equal authorized use supply	Transport Ministry of Energy Ministry of Transport , Automotive Industry paths state Committee on Economics progress And poverty decrease Ministry of Information technologies And communications develop Ministry of Investments And external trade Ministry , state customs Committee , JSC " Oztransgaz "	Economic prosperity
Task 9.2. Complex And stable towards industrialization help And processing donor networks intensive development , resource economizer And ecological safe technologies wide application through There is enterprises modernization And new organization grow way with industry by 2030 working release gross interior in the product share up to 40 percent deliver .	Economic progress And poverty decrease Ministry of Innovation development Ministry of Economy, JSC " Uzavtosanoat ", Association " Uztokimachiliksanoat " , JSC " Uzbekneftegaz ", JSC " Uzkimyosanoat" , society	Economic prosperity
Task 9.3. May industry enterprises And small enterprises financial from the services that including cheap ones from loans use opportunity extension And working production and sales step by step added value harvest do And to the markets integration strengthen .	Small business And entrepreneurship develop Agency , Economic progress And poverty decrease Ministry , Central bank *(agreement based on)* , Investments And external trade Ministry , state tax Committee , State customs committee	Economic prosperity
Task 9.4. Infrastructure by 2030 modernization And industry enterprises again equipment , resources use And clean And ecological safe technologies And working release from processes wide use because of their stabilization in which All interested countries their individual to opportunities corresponding participation provide .	Innovative development Ministry of Economy , progress And poverty decrease Ministry of Ecology And neighborhood environment protection do state Committee on Hydrometeorology service center , farm society	Economic prosperity

[4]" Until 2030" during the period stable development in the field national target And tasks made increase acceleration in accordance with additional measures O " Uzbekistan Republic Ministers Resolution of the Court of the Republic of Uzbekistan dated February 21, 2022, No. 83 / https://lex.uz/docs/-5870397

Task **9.5. Economics** networks technological potential increase aimed at scientific research , including innovative activity For comfortable conditions create And scientific research And construction in the field employees double the number by 2030 increase through to revive .	Innovative development Ministry of Science , Academy , Information technologies And communications develop Ministry of Economy , progress And poverty decrease Ministry of Higher Education And middle special education Ministry of Construction Ministry of Youth Affairs works agency , research institutions , economic society	Economic prosperity
Task 9.b. Local technologies in the field developments , research And innovations , including industrial ones diversification For comfortable was political environment create And raw materials in sectors by 2030 increase through support	Innovative development Ministry of Economy , progress And poverty decrease Ministry of Investments And external trade Ministry of Trade and Industry camera	Economic prosperity
Task 9.c. Information and Communication from technology use opportunity serious respectively extension and from the Internet general And cheap use provide .	Information technologies And communications develop ministry	Economic prosperity

Conclusion and suggestions

Ideas of sustainable development and ecological economics have become one of the central issues of modern economic thought. Looking back at the history of economic doctrines, we can see that humanity's economic activity has evolved through several stages — first aimed at survival, then at wealth accumulation, and now at ensuring sustainability. This evolution reflects not only the transformation of production methods but also the growing sense of human responsibility toward nature. The global ecological crises of the 1970s such as air and water pollution, deforestation, and climate change forced humanity to reconsider the quality and consequences of economic growth. Although the Industrial Revolution's expansion of production brought short-term benefits, it disrupted ecological balance in the long run. As a result, the depletion of natural resources, environmental degradation, and rising social inequality pushed economic policy toward a new direction. Since the 1970s, the term "ecological economics" has emerged as an independent scientific field. Scholars such as Herman Daly and Robert Costanza argued that it is necessary to consider ecological factors when measuring the quality of economic growth. In their view, the economy is not only a "monetary circulation" system but also a "circulation of energy and resources." Consequently, the artificial barrier between economics and ecology began to disappear.

By the 21st century, these ideas had reached the level of global policy. Concepts such as "green economy," "circular economy," and "zero-waste production" have become not only academic theories but also the foundation of policies in developed countries. For instance, in Scandinavian nations, a large portion of energy comes from renewable sources. This is not merely an environmental initiative but a strategy for economic stability. In the case of Uzbekistan, the idea of sustainable development has recently taken on a practical form. "Green energy" projects, the construction of solar and wind power plants, the development of waste recycling systems, and the introduction of water-saving technologies all demonstrate the implementation of ecological economy principles. Though this process is ongoing, each step represents a new stage in the

evolution of economic thinking. Thus, today's ecological economy is not only a new economic model but also a new phase of human civilization — the most conscious and responsible stage in the history of economic thought.

As mentioned above, the Government of the Republic of Uzbekistan is actively working in this field. Several measures related to this topic are outlined in the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 83 dated February 21, 2022, "On additional measures to accelerate the implementation of national goals and objectives in the field of sustainable development until 2030." These measures will be analyzed in tabular form below.

The above analyses show that the ideas of sustainable development and ecological economics are the result of a profound evolution in human thought. In the history of economic doctrines, humans initially sought to dominate nature, but today they increasingly recognize the necessity of preserving it and maintaining balance. This transformation is not merely an economic shift but a deep intellectual and moral turning point. True prosperity is not defined solely by material wealth but by a healthy ecological environment, clean air, pure water, and green nature.

The concept of sustainable development is not only an opportunity but also a responsibility for the current generation. Integrating economic activity with ecological and social dimensions is one of the most pressing tasks of our time. Every stage of economic policy — from planning to investment — must be reconsidered through ecological criteria. The essence of ecological economics lies in measuring human activity by the capacity of nature itself — placing the question "How much can nature endure?" at the center of economic planning. In Uzbekistan, the transition to an ecological economy is still in its early stages, but the direction is correct. Projects such as "Green Energy," the "Sustainable Development Strategy until 2030," modernization of water and waste management systems, and renewable energy development represent significant progress. However, it is essential to further deepen this process and promote ecological culture among the wider public. Ecological economics is not merely a matter of policy but of mindset — a way of thinking that encourages humans to live in harmony with nature.

Based on the above analysis, the following recommendations can be proposed:

1. Strengthening ecological-economic thinking in the education system – Topics related to sustainable development and environmental responsibility should be incorporated into mandatory curricula from primary school to higher education. This will help foster an environmentally conscious attitude among the younger generation.
2. Promoting "green technologies" – Industrial enterprises that implement energy-efficient, waste-free, and environmentally friendly production systems should be supported through tax incentives and preferential credit programs.
3. Accelerating the transition to renewable energy sources – Investing in solar, wind, and biogas technologies brings not only environmental benefits but also significant economic advantages.
4. Promoting ecological awareness among the population – Mass media, social networks, educational institutions, and public initiatives should be used to popularize an environmentally friendly lifestyle.
5. Expanding scientific research – It is essential to develop research works that integrate the theory of ecological economics with national characteristics, building upon the historical evolution of economic thought.

Foydalanilgan adabiyotlar

1. "2030-yilgacha bo'lgan davrda barqaror rivojlanish sohasidagi milliy maqsad va vazifalarni amalga oshirishnin jadallashtirish bo'yicha qo'shimcha chora-tadbirlar to'g'risida" gi O'zbekiston Respublikasi Vazirlar Mahkamasining 21.02.2022 sanadagi 83-son qarori / https://lex.uz/docs/-5870397

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