

FACTORS IN THE DEVELOPMENT OF THE "GREEN" SERVICES SECTOR

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Abstract: The article highlights key factors that contribute to the growth and development of the "green" services sector. According to the author, it is believed that environmentally oriented services aimed at increasing the resilience of the economy help reduce the negative impact on the environment. Based on this, the author focuses on economic, social, technological, and institutional aspects. All of these contribute to the growth and development of this field.

Thus, as a result of the research, the author analyzes factors such as the activation of environmental legislation and the expansion of institutional frameworks within the interactions of business structures under conditions of ensuring sustainable development based on innovative achievements in technology and engineering.

As a result of studying and analyzing this issue, the role of education and raising environmental awareness among economic entities is substantiated, and the prospects for the development of "green" services as a strategic direction for achieving sustainable development goals in the country are identified.

Keywords: Environmentally oriented services; Economic sustainability; Environmental impact; Institutional aspects; Strengthening environmental legislation; Expanding institutional frameworks; Integrated approach of business structures; Ensuring sustainable development; Innovative achievements; Environmental awareness of stakeholders; Prospects for the development of "green" services

1 INTRODUCTION

The need to introduce "green" technologies is caused by serious disturbances in the natural and living environment of people. Such disturbances are fraught not only with degradation and irreversible consequences of ecosystem deterioration, but also with the complication of assessing the risks threatening the existence of human society.

In this regard, the analysis of specific sectors of the economy, where greening can play a key role, is of particular relevance. For example, the service sector of the Republic of Tajikistan, which is in the process of accelerated development, faces a number of challenges and opportunities on the way to greening the environment. "Green" transformation in this sphere requires a comprehensive approach, including optimization of resource consumption, introduction of environmentally friendly technologies and increasing the environmental responsibility of participants in business structures. In this context, the adaptation of international experience, taking into account the specifics of the national economy based on natural and socio-cultural features, is of particular importance.

2 REVIEW OF RELEVANT RESEARCH

The modern world is undergoing a dynamic process of "green" transformation aimed at reducing the negative impact of economic activity on the environment. Among the various sectors of the economy that require transition to sustainable development models, the services sector occupies a special place, playing a key role in the formation of more environmentally friendly behavioral practices, compliance with social norms and application of new forms of economic mechanisms. In the context of global climate change and increasing environmental requirements, Tajikistan, as a country with rich natural capital and a growing diversified economy, faces the need to adapt the services sector to the requirements of sustainable development.

Modern global challenges, including climate change, depletion of natural resources and degradation of ecosystems, require rethinking and transformation of economic models in all sectors, especially in the service sector. This sector is considered a key segment of the national economy along with natural resource extraction and industry, which includes the provision of intangible goods that contribute to the full, timely and qualitative satisfaction of the demand of the population, businesses and the state (Table 1).

Table 1 Characteristics of the Service Sector

Direction of service sector characterization	Description of the content of the service sector direction
Definition of the service sector	The services sector includes activities related to the provision of intangible benefits aimed at meeting the needs of the population, businesses and government agencies.

Structural description of service sector activities	<ol style="list-style-type: none"> 1. Intangible nature: services cannot be stored or transported. 2. Often requires interaction: rendered through direct interaction with the consumer. 3. Consumption coincides with production: services are consumed at the time they are provided.
Main types of services	<ol style="list-style-type: none"> 1. Financial services: banks, insurance companies. 2. Educational services: schools, universities, courses. 3. Health care: medical facilities, pharmacies. 4. Transportation and logistics: airlines, trucking. 5. Tourism and hospitality: hotels, restaurants. 6. Information technologies: software development, IT-consulting. 7. Creative services: advertising, design. 8. Public services: police, social protection.
Place and role of the services sector	<ol style="list-style-type: none"> 1. provides a high level of employment. 2. Contributes significantly to GDP. 3. Improves quality of life through accessible and modern services. 4. Tourism, telecommunications and financial services are actively developing in developing countries.

***Source:** Compiled by the author on the basis of electronic resources.

Global practice shows that the services sector is multifunctional and has a proportionate impact on the diversification of national economies. This sector, encompassing tourism, transportation, finance, education, information technology and health care, plays a significant role in supporting sustainable development by influencing consumption patterns, social norms and business practices.

As a result of the study it turns out that for countries with high natural vulnerability. In particular, the Republic of Tajikistan, where the transformation of the services sector in accordance with the principles of "green" economy is taking place. This shows the degree of relevance and importance of studying this problem, given the dependence of the economy and welfare of the population on the state of quantity and quality of ecosystems.

In terms of its content, the green transition of the services sector represents a qualitative change. In particular, the transition to an economic model that takes into account the environmental, social and economic aspects of sustainable development. In this perspective, the services sector adapts to the requirements of sustainable development and introduces more efficient, environmentally friendly and cost-effective solutions aimed at reducing the negative impact on the natural environment. These measures contribute not only to improving the quality of life of the population, but also to strengthening the environmental security and economic stability of the country.

3 THEORETICAL ANALYSIS AND RESEARCH HYPOTHESIS

For the Republic of Tajikistan, which has significant resources in hydropower, agriculture and biodiversity, green transformation of the services sector opens new opportunities for diversifying the economy, strengthening social sustainability and creating new green jobs. The application of green technologies in sectors such as tourism and hospitality can help not only to increase tourist arrivals, but also to maintain natural and cultural heritage. Adhering to green economy rules in information technology, finance and logistics can increase economic efficiency, reduce resource consumption and promote the development of necessary infrastructure.

Expanding climate change, which leads to the depletion of natural resources and deterioration of ecosystems, requires timely rethinking and transformation of economic activities in all sectors of the national economy. One of the key areas of modern economic development is the transition to the transformation of the services sector into a "green" sphere, which, despite its complexity, has a significant impact on economic growth. For countries with a high level of vulnerability of natural potential and developing economies, such as the Republic of Tajikistan, the introduction of environmental approaches in the services sector is a necessity, as well as a measure to ensure long-term sustainability and competitiveness of the services sector.

"Green" economy in the sphere of services is focused on sustainable development, reduction of negative impact on nature and rational use of resources. The essence of the "green" economy in this sphere is the transition of the service sector, in which the approaches to qualitative indicators to the provision of services have been changed in order to improve their quality, accessibility and satisfaction of consumers' needs. This process is driven by innovation, digitalization, new flexible business models and adaptation to the new realities of changing market conditions. The service sector is part of the green economy, which in turn is a crucial link for transforming the economy into a green economy. In many countries, the development of the service sector as part of the green economy is becoming an important driver for achieving sustainable development goals. For example, Europe is a leader in the implementation of environmental standards. Waste recycling, energy-efficient construction and consulting services are being actively developed here. In the European Commission, out of the six objectives put forward for the period 2019-2024 (EU COM, 2019), three objectives are relevant to the development of services as part of the green economy and the services sector is a crucial factor in achieving these objectives. The European Green Deal envisages the realization of the following

priorities: an economy that works for people and a Europe fit for the digital age [1]. "Green" and sustainable services cover a wide range of areas such as renewable energy, waste management services, energy consulting, green building (Table 2).

Table 2 Structure of Green Services and Their Characteristics

"Green" service	Description	Main features	Advantages
Waste processing services	Recycle and reuse materials to minimize waste.	Reducing pollution, improving the environment, raising awareness.	Reducing waste, saving resources, improving the image of companies.
Energy consulting	Assessment and optimization of energy consumption in buildings and businesses.	Energy saving, energy efficiency improvement, reduction of carbon emissions.	Reduction of energy costs, improvement of energy efficiency.
Renewable energy	Utilization of solar, wind, geothermal and other alternative energy sources.	Reducing carbon footprint, climate resilience, clean energy utilization.	Long-term savings, support green solutions, reduce dependence on fossil sources.
Green building	Design and construction of buildings taking into account the principles of sustainable development and energy saving.	Energy efficiency, use of environmentally friendly materials, reduction of emissions.	Reduced operating costs, improved air quality, increased comfort.
Ecological tourism	Tourism that minimizes negative impacts on nature and supports local ecosystems.	Conserving nature, supporting sustainable communities, minimizing waste.	Supporting ecosystems, raising awareness of environmental issues, developing local economies.
Landscaping services	Landscape design and the creation of green spaces in cities.	Reduce air pollution, improve quality of life, increase biodiversity.	Improvement of microclimate, aesthetic improvement of the environment, support of local flora.
Water resources management	Water efficiency, treatment and reuse services.	Reducing water consumption, minimizing pollution, sustainable use of resources.	Reducing water costs, improving the environmental situation, and increasing the sustainability of ecosystems.
Eco-logistics	Transportation using environmentally friendly vehicles and optimization of logistics processes.	Reducing carbon dioxide emissions, saving fuel, utilizing renewable energy sources.	Reducing carbon footprint, lowering fuel costs, improving public image.

***Source:** Compiled by the author on the basis of electronic resources.

The table below shows the key categories of green services, their examples and characteristic features, which allows structuring information on current trends in sustainable development and the role of green services as a significant element of the modern green economy. In this regard, the current demand for environmental services is showing steady growth, driven by the global sustainable development agenda, increasing environmental regulations and the need to reduce the carbon footprint. Major demand drivers include climate change, depletion of natural resources, and the desire for a cyclical economy. The Paris Agreement, the UN Sustainable Development Goals (SDGs) and other global initiatives are incentivizing countries to invest in environmental services. For example, SDG 12 ("Ensure sustainable consumption and production") is directly linked to waste recycling and energy efficiency. Countries with developed economies are introducing strict laws regulating emissions, waste management and resource utilization. Companies are forced to engage environmental consulting, recycling and renewable energy transition services. Rational assessment and correct information about the state of environmental resources, contributes to the demand for goods and services. As practice shows in recent years in the global tourism market, the ecological direction of tourism is becoming more and more popular. The demand for services for the installation of solar panels, wind turbines and other "green" energy is growing at a rate of about 10% annually [2]. Major countries such as China, USA and Germany are leading the sector. The recycling segment is estimated at \$100 billion annually and includes recycling of plastic, e-waste and biowaste [3]. EU countries recycle more than 40% of household waste, which drives the services in this sector [4]. The main demand is observed in North America and Europe. North America has high demand for renewable energy and green building due to corporate responsibility of large companies. China and India are becoming major players in recycling and renewable energy. Growth here is driven by both government initiatives and high rates of urbanization. Africa and Latin America, despite low penetration of environmental services, are seeing an increase in demand due to international investment and infrastructure development programs.

The International Energy Agency (IEA) estimates that the global market for environmental services will increase to \$1 trillion by 2030 [5].

In this regard, in our opinion, the global demand for environmental services will only increase as the transition to a green economy becomes a priority for all countries, including the Republic of Tajikistan. This approach will create huge opportunities for businesses implementing innovations in the field of sustainable development

Gretchen Daly, a distinguished scholar of ecology and economic valuation of natural resources, in her paper "Natures Services: Societal Dependence on Natural Ecosystems", is one of the first major works to address the concept of ecosystem services-benefits that humans derive from nature. The focus is on developing methodologies for assessing the value of ecosystem services in order to integrate them into decision-making. Daly emphasized that protecting these natural processes is vital to the long-term well-being of humanity. These services include climate regulation, soil

fertility, pollination, pest control, and water purification. This paper focuses on developing methodologies to estimate the value of ecosystem services in order to integrate them into decision making [6]. The valuation methodologies proposed in this paper provide a framework for integrating ecosystem services into economic planning and environmental policy, allowing for the integration of ecological considerations into land use, urban planning and natural resource management decisions. This work remains relevant today and is an important reference point for research in the field of ecological economics and environmental protection.

Robert Constanza is an American academic environmental economist who has worked on the integration of ecological and economic systems for sustainable management of natural resources. Robert Constanza, in his article "The Value of the World's Ecosystem Services and Natural Capital," estimates the global economic value of ecosystem services and natural capital. According to the study, the value of services such as pollination, climate regulation and water purification is about 33 trillion dollars per year [7]. Constanza's research has made a fundamental contribution to the realization of the role of ecosystem services as a key element of natural capital. His work linking economics and ecology provides a framework for decision-making for conservation and sustainable development.

The transition to a green economy in the service sector is not only urgent, but also strategically important for achieving sustainable development. Today's global challenges require countries and companies to reconsider their approaches to resource use, implement innovative technologies and switch to models that minimize environmental damage.

Several key conclusions can be drawn from the analysis:

1. Adoption of green technologies and approaches not only reduces carbon footprint, but also contributes to job creation, enhances the competitiveness of companies and improves the quality of life of the population.
2. Integration of modern technologies, digitalization of processes, and active participation in international programs and projects are important for successful implementation of green initiatives.
3. Developing economies such as the Republic of Tajikistan face limited resources and insufficient infrastructure. However, utilizing global best practices and investing in green services can be the basis for sustainable economic growth.

The transition to a "green" model requires not only economic investment, but also a change in outlook.

Companies, governments and society as a whole must embrace the ideology of sustainable development as the basis for their actions. It is important to understand that greening the economy is not just an obligation to future generations, but also an opportunity to ensure people's well-being and preserve the planet's natural capital today.

4 EMPIRICAL RESULTS AND ANALYSIS

The prospects for further research and implementation of the green economy offer tremendous opportunities for business, science and international cooperation. "Green transformation in services can be a key tool for building a more harmonious world where environmental sustainability goes hand in hand with economic progress.

With the digitalization of the economy, the introduction of "green" technologies in all spheres of the economy is becoming increasingly relevant. The service sector plays an important role in the sustainable development of the economy as a whole, and it also has significant potential for the introduction of green technologies and sustainable practices. "Green" technologies, also known as eco-technologies or clean technologies, are innovative methods, materials and processes designed to reduce the negative impact on the environment. They aim to reduce pollutant emissions, energy consumption, resource utilization and waste creation. "Green" technologies help to reduce energy consumption by optimizing processes and using energy efficient devices, are based on the use of renewable energy sources such as solar, wind, hydropower and biomass. Green technologies also help to reduce greenhouse gas emissions and other harmful substances in the atmosphere, which helps to combat climate change. "Green technologies include recycling techniques and recycling, which helps reduce the amount of waste going into landfills.

In their writings, Charlotte Brin and Stephen Carter focus their attention on the dual impact of the IT sector on the environment and the need to develop sustainable practices and technologies that will help minimize the negative impact [8]. The introduction of sustainable IT practices is considered necessary, as the transition to a "green" economy cannot be imagined without IT technologies. For the Republic of Tajikistan, the role of the IT sector in sustainable development is particularly relevant, as the country is just beginning to actively introduce digital technologies in various spheres of the economy. The development of IT infrastructure contributes to increased efficiency and productivity in key sectors such as agriculture, industry and energy. However, as Brin and Carter point out, with the growth of the IT sector also comes environmental challenges related to increased energy consumption and the need to dispose of e-waste [9]. The implementation of sustainable practices in the country, in general, needs to take into account the limited natural resources and the peculiarities of the energy sector in the country, which has a significant impact from hydropower. The implementation of sustainable practices in the information and communication sector includes the need to utilize energy efficient technologies and effective e-waste management. Dr. Akira Yoshino, Director of the Center for Zero Emissions Research (GZR), emphasized the importance of developing innovative technologies to address global environmental challenges, including those related to the service sector. He noted that the use of advanced technologies, such as multilayer solar panels and lithium-ion batteries, can help improve efficiency and sustainability in areas where traditional methods have been limited, including buildings, transportation, and ICT devices [5]. Dr. Yoshino also emphasized that the adoption of cleantech represents a "golden business opportunity", creating new markets and stimulating economic growth. He argued that integrating green technologies, including energy and waste management, into services can be a key step towards sustainable development [5]. Dr. Yoshino focuses on the fact that innovative

technologies such as multilayer solar panels and lithium-ion batteries can solve major environmental problems in sectors with traditional constraints. For the service sector, this is of particular importance, as such technologies can improve the energy efficiency of hotels, office buildings, transportation services and ICT devices, which are increasingly in demand. Energy-saving technologies can help the hospitality industry reduce energy consumption, especially in regions with limited access to energy resources. The use of solar panels can be the basis for sustainable tourism development in remote mountainous areas. "Green technologies as drivers of economic growth" Yoshino emphasizes the dual benefits of adopting environmentally friendly technologies, on the one hand it is the reduction of environmental burden and on the other hand it is the creation of new market opportunities. "Golden Business Opportunity" reflects the need to look at environmental solutions not as an additional expense, but as an investment in the future. Implementing waste and energy management in the service sector can stimulate economic growth by creating jobs in technology and sustainable design. Dr. Yoshino's statement on the importance of integrating green technologies into the service sector emphasizes that sustainable development is not possible without rethinking basic approaches to energy and waste management. The integration of these technologies can be an important step to improve the sustainability of hotel chains, transportation companies and other services. For example, the use of ICT devices for energy management in buildings reduces costs and contributes to reducing carbon footprints. The ideas of Dr. Akira Yoshino are important for understanding the role of the service sector in the global environmental context. The development and implementation of environmentally friendly technologies is not only a tool for addressing global challenges, but also a source of economic opportunities. For the Republic of Tajikistan, this approach can become key in achieving sustainable development goals, especially given the growing interest in eco-tourism and sustainable urbanization.

These data illustrate key aspects including energy consumption, waste management, economic benefits and environmental impacts (Table 3).

Table 3 Indicators for Analyzing the Introduction of Environmentally Friendly Technologies in the Services Sector

Indicator	Description	Units of measurement	Data source	Utilization practice
Share of clean energy utilization	Share of renewable energy sources (solar, wind, hydro) in the company's total energy consumption	%	Energy companies, IEA reports, ISO 50001	Analysis of energy consumption of hotels and cafes
Number of implemented environmental technologies	Number of implemented solutions to reduce emissions, save resources (LED lighting, eco-filters, etc.)	Quantity	Internal company reports, data from environmental agencies	Evaluation of technology adoption in shopping centers
CO ₂ emission reduction level	Reduction of carbon dioxide emissions after the implementation of technologies	Tons of CO ₂	Environmental agencies, emission calculation software	Comparison of emissions before and after modernization
Investments in environmental technologies	Amount of funds allocated for the acquisition, development and implementation of "green" technologies	US dollars, Euros	Company financial reports, grant data	Economic feasibility assessment
Share of recycled waste	Percentage of waste that is recycled or reused	%	Local recycling services, environmental reports	Comparison of recycling in restaurants and offices
Energy consumption level	Average amount of energy consumed by to provide a service or operate a facility	kW · h /service	Energy companies, IoT sensors	Comparison of energy consumption per square meter
Awareness level of employees	Percentage of personnel trained in environmental standards and technologies	%	HR reports, test and questionnaire results	Evaluating the effectiveness of training in companies
Level of customer satisfaction	Percentage of clients who positively evaluate the company's environmental efforts	%	Customer surveys, feedback on platforms	The impact of sustainability on customer loyalty
Number of "green" certificates	Number of certificates confirming compliance with environmental standards (e.g. LEED, ISO 14001)	Quantity	Certification organizations, internal reports	Comparison between competitors in the services sector
Water saving	Volume of water saved due to new technologies (e.g. installation of water saving faucets)	Liters/year	Water utilities, internal reports	Evaluation of implementation in the hospitality industry

*Source: Compiled by the author on the basis of electronic resources.

5 CONCLUSION

Bill McDonagh, renowned architect and author of the concept of "Circular Economy", vividly emphasizes the importance of green technologies: "The design of the future must be based on principles that not only minimize harm, but also benefit ecosystems and society. Green technology is not just a way to reduce negative impacts, it is an

opportunity to create a positive footprint" [6]. This statement says that implementing green in services is not just a way to solve environmental problems, but a strategic opportunity to create sustainable systems that work for the benefit of people and nature. It is an approach that transforms the very basis of economic activity, shifting the focus from the traditional model of resource consumption to cyclical, innovative and resource-efficient development. "Green" technologies make it possible to integrate environmental aspects into all stages of service provision: from design and production to final consumption and utilization. This approach minimizes the negative impact on the environment and at the same time opens up new prospects for economic growth, creating green jobs and stimulating investment in sustainable technologies. Moreover, it enables service companies to become leaders of environmental change, shaping a new quality standard based on environmental safety, social responsibility and innovation. This is why green technology is becoming a key element of strategic planning to achieve sustainable development goals. This is why green technologies are becoming a key element of strategic planning aimed at achieving sustainable development goals. Their integration into economic and social activities contributes not only to the reduction of anthropogenic impact on the environment, but also to the creation of an innovative growth model that balances economic efficiency, environmental sustainability and social justice.

In the service sector, the application of green technologies can transform traditional business processes by introducing environmentally friendly and resource-efficient practices. This includes optimizing energy consumption, reducing waste, increasing digitalization and adopting renewable energy sources. In addition, green technologies help businesses adapt to changes in consumer preferences, which are increasingly oriented towards environmentally responsible companies and services.

Thus, the strategic implementation of green technologies not only meets today's environmental and economic challenges, but also forms the basis for long-term sustainable development. It is a way to create innovative solutions that will be relevant in the context of global environmental transformation, strengthening the competitiveness and sustainability of economic sectors, including the service sector.

Economics, at first glance, has no relation to ecology. Historically, it has also developed relatively independently of environmental indicators. However, the connection between economics and ecology can be traced already in the interpretation of these terms. Translated from Greek, ecology means the doctrine of the home, and economics means the art of housekeeping. The economy of society has always depended on natural resources, their quality and availability. The deep connection between economics and ecology became apparent when the reverse impact of nature (and not just nature) changed by people on man and his economy became obvious [10]. In this regard, countries and regions began to introduce sustainable "green" practices, model sustainable business models, and create green economy indices for various segments of services. Thus, in order to implement "green" business models that can reduce energy consumption and greenhouse gas emissions, it is necessary to "green" the policy of economic management of the economy as a whole. Examples of implementing green business models are circular models, production of environmentally friendly products, energy efficient technologies, and product take-back models. By applying "green" business models [11-12], it is possible to achieve a reduction in the negative impact on the environment, rational use of resources and energy, and meet the needs of consumers in environmentally friendly products and services.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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