

IMPORTANCE OF GREEN INVESTMENTS FOR TOURISM DESTINATION DEVELOPMENT

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ABSTRACT. Climate change is a well-known global megatrend, a macroeconomic and geostrategic force affecting the present and future of the Earth, the global economy, tourism, business, heritage, society and individuals. Timely awareness of these threats by all states, taking responsibility and joint efforts to combat climate change is the only solution. Eco-innovations play a major role in ensuring sustainable development in the new era. The process of tourism growth poses new challenges for researchers. Our research object is related to sustainable challenges, green economic development, rate of sustainability of tourism resources in the tourism cluster. Eco-initiatives, green economy initiative, green investments in business, environmental protection and preservation of a safe environment for future generations are significant in the aspect of sustainable management of the destination. Environmental protection issues, green production, green skills detection, shadow side detection, widening possibilities and introduction of new perspectives are important tasks of research. The methodological basis of the work is qualitative research methods, interviews with selected focus groups, data analysis, and processing of analytical material presented in open sources.

KEYWORDS: GREEN, ECONOMY, SUSTAINABLE, ECO-INNOVATIONS.

INTRODUCTION

Climate change is listed as one of the top five global threats and is "increasing much faster than expected". Today, the concept of a green economy as a new source of growth has become important. It has led to the creation of various quantitative indicators and ratings to determine the position and future directions in the global economic space. Within the framework of the 2008 UN Environment Protection Program, the Green Economy Initiative was created, which involves initiatives in several directions, the transition to renewable energy, increasing the production of vehicles, supporting organic agricultural production, and creating ecological infrastructure. And their common goal is to implement green investment policies. Today, the development of production and industry is developing at a fast pace, accompanied by negative changes in the

environment, which ultimately leads to ecological problems. The local economy should strive for sustainable growth and higher productivity. A significant part of the global investments in "green technologies" are public investments; venture capital and private investment companies remain the leading force in the development of this sector.

Human production activities cause major damage to nature. In humans, the instinct for material interest and the factor of financial interest is so strong that it covers the natural instinct of resistance and self-preservation. Focused on protecting the environment, the ecological footprint in production ensures a healthy future for both the environment and people. Nature's contribution to humanity is estimated at \$124 trillion per year, which is far greater than the world's gross domestic product (GDP) from economic activity.¹

1 <https://medium.com/earthtokens/tapping-into->

Great importance is attached to the development of new-generation industries, including tourism and hospitality, in the format of the concept of sustainable development. Tourism affects the economy and, at the same time, in turn, affects the economy of the country. The economic nature of tourism is manifested not only in the fact that the product of economic activity is created in the sector but also in the fact that certain resources need to be spent to create it. Based on all of the above, an individual economic entity, country, region, or field should be considered from the perspective of a sustainable concept. The goal of our research is to study global challenges at the local level. We tried to find out the extent of the ecological footprint in local production, the focus of the facilities on ecological management, ISO standards in production, the share of enterprises in renewable energies, what is the control of sustainable development. The paper identified contemporary challenges related to green investments. The target groups were business-entrepreneurial organizations, the energy sector, banks, hotels, catering facilities, population using solar panels.

RESEARCH METHODOLOGY

To achieve the goal and objectives of the research, we were guided by qualitative research methods, which means, on the one hand, the processing of analytical material presented in open sources, on the other hand, the survey of representatives of relevant professional circles, in-depth interviews with various parties of the tourism value chain. As part of the desk research, the literature and publications were analyzed (the Green Book of the Climate Change Law of Georgia-2023, "Green Entrepreneurship", "Green Alternative", "Standards in Tourism", legislative-policy documents and others).

DISCUSSION AND RESULTS

If we consider the destination in the aspect of sustainable management development, eco-initiatives, such as green economy initiative, protecting the environment from consumerism and maintaining a safe environment for future generations are significant.

[a-120-trillion-natural-asset-market-one-token-at-a-timed843e53c0862](https://www.a120-trillion-natural-asset-market-one-token-at-a-timed843e53c0862)

According to many specialists, the green economy includes six main sectors:

- Renewable energy (solar, wind, geothermal, biogas);
- Green buildings (green products and materials);
- Sustainable means of transport (alternative fuel, public transport, hybrid and electric transport);
- Water management (water purification systems, water use);
- Waste management (utilization, use of municipal waste materials, improvement of soil fertility, cleaning);
- Land management (organic agriculture, urban parks).

Energy is a dominant factor in the field of climate change, as it accounts for 65% of global greenhouse gas emissions. The main task of the world energy market is the development of renewable energy, obtaining solar, wind, water, biomass, and geothermal energy, the main advantages of which are environmentally friendly, non-damaging and inexhaustible resources. According to the International Energy Agency, between 2019 and 2024, the installed capacity of renewable energy will increase by 50%, in which solar photo (PV) will play the main role.² According to the International Renewable Energy Agency, by 2050, solar photovoltaic systems will cover the electrical energy needs of a quarter of the world's population, making the sun the second largest generation source after wind. The socio-economic factor is worth noting, the global solar industry will employ approximately 18 million people by 2050.³

By 2050, solar devices will generate 45% of the world's energy demand, with virtually every sector of industry incorporating solar energy into the manufacturing process. According to the International Energy Outlook (IEO) 2019 report, by 2050, compared to 2019 data, global energy consumption will increase by 50% and in developing countries by 79%.⁴

As discussed, the transition to renewable energies is a priority in many countries of the world today. Howev-

2 International Energy Agency, 2019, Renewables 2019 – Market analysis and forecast from 2019 to 2024, <https://www.iea.org/reports/renewables-2019>

3 International Renewable Energy Agency, 2019, Future of solar photovoltaic – Deployment, investment, technology, grid integration and socio-economic aspects, <https://www.irena.org/publications/2019/Nov/Future-of-Solar-Photovoltaic>

4 World Energy Outlook 2019, <https://www.iea.org/reports/world-energy-outlook-2019>

er, the situation in Georgia is unfavorable in this regard. The first "Kartli Wind Power Plant" was financed with the support of the European Bank for Reconstruction and Development, the Green Growth Fund (GGF) and other international donors. The investment was 29.7 million USD, the capacity is 20.7 MW, and it will generate 84.1 million kW/h. energy,⁵ which is 0.7% of the gross domestic product. At present, a memorandum of understanding has been signed for the construction of 21 wind farms with a total installed capacity of 1,204 MW and an annual output of 4,653 GWh. Work is underway to sign a memorandum for 3 wind farms (total capacity 150 MW, estimated annual output 554 GWh). Although one station is not enough, it is necessary to implement existing practices and develop sustainable energy. It is also a fact to consider that climate change means an increase in temperature, which reduces air density and reduces energy production. Solar power plants are found on a small scale in the region, as is known in Semek's "net metering" mechanisms. Georgia intends that by 2030, the share of renewable energies in the total final energy consumption will be 27.4%. Electricity consumption in Georgia is 1700 MW, of which 1300 MW is generated in Georgia, Georgian production, and 400 MW is imported, which we buy from neighboring countries. Along with the development of the economy, the demand for electric energy increases. Today, the share of solar energy that we get is less than 1%, and in most regions of Georgia, the annual duration of sunshine ranges from 255-280 days a year, which is about 1900-2200 hours a year and is effective for energy consumption.⁶

Analyzing two factors, wind speed and air density, is important in terms of climate change to generate electricity from a wind farm. Increasing the wind speed at certain limits positively affects the amount of electricity the turbines produce. There is a cubic dependence between the wind speed and the power generated by the station. 4 m/s is the lower limit of wind velocity at which large wind stations generate minimal energy. Georgia, with average wind speeds, is an attractive location for the development of wind stations for the period 2041-2070 and 2071-2100, including Mta Sabueti, Kutaisi, Paravani, Batumi and Goderdzi Pass, where the average wind speed is more than 4 m/s.

Extreme events caused by climate change may dam-

age the wind station infrastructure and endanger the operation of the stations. Consequently, it is important to carry out an in-depth study of current and planned wind power projects in the area of current and future climate and geological changes and to take into account the initial stages of adaptation.

We think the sun will really rise in this industry if more attention is focused on green investments like those that produce solar panels. Although the awareness of the population about solar systems is low, on the other hand, it is difficult for a large part of the population to buy solar electricity. Having made the initial investment in the stations, the public is generally open to new technologies, so they believe that if their awareness increases, their consumption practices will soon increase. According to the opinion of the respondents interviewed by us, it is necessary to solve similar issues at the local level for the development of sustainable tourism. For example, according to a representative of one of the solar systems companies, a 1-kilowatt plant generates an average of 100 kilowatt-hours of energy per month, less in winter and more in summer, although excess energy is stored through the net metering system and can be used in winter when the plant's output is less. 100 kilowatt-hours of energy is the minimum package for one average household, which separates the lighting, the operation of the refrigerator, washing machine and TV. "1-kilowatt station costs from 650 to 900 dollars. You can make a big station for \$650. 1 kilowatt gives you 1300 kilowatt-hours of electricity per year.

Due to its geographical location, the rate of solar radiation in Georgia is high. Some regions of the country are characterized by 250-280 sunny days annually, which is about 6,000-6,780 sunny hours per year. Solar energy potential varies from 1,250-1,800 kWh/m², depending on the region. In terms of solar power usage in Georgia, there are mainly two technologies used for heat and electricity. The first is the solar collector, which is relatively widespread in Georgia and used for water heating. Second, solar photovoltaic generators, which are slowly being introduced in the country and used for electricity production.⁷ Thus, the potential of solar energy is quite large, allowing the business sector to harness and absorb solar energy to become energy

5 <https://gedf.com.ge/project/4-qartlis-qaris-eleqtrosadguri>

6 Devidze M., Solar energy in Georgia.

7 MEPA (2021) Fourth National Communication, Georgia, under the United Nations Framework Convention on Climate Change, https://unfccc.int/sites/default/files/resource/4%20Final%20Report%20-%20English%202020%2030.03_0.pdf

independent in terms of reducing utility costs and attracting various green investments.

"Green hotels" mean not only an ecologically clean environment but also 70% of all consumed electrical energy is produced using renewable energies. One of the most favorable facilities for installing solar panels is hotels and restaurants. Hotels and restaurants belong to those businesses where a large amount of electrical and thermal energy is consumed. Installing solar panels can reduce monthly costs by 70-80%. The research shows that there are only a small number of family-type hotels with solar panels in the region. Our country has more opportunities. In different countries of the world, 35% of the share of effectiveness is considered good, and in Georgia, there is a possibility of more than 40%. If we also consider the potential of hydro resources, the country has the opportunity to become energy independent and an exporter.

Green investment and development of projects in the country require a lot of financial support. Actually, it is difficult to accurately calculate the financial resources, which exactly means moving the country to the green rails. Bloomberg agency compiled a rating of banks that have recently made large investments in ecology and renewable energy. The Spanish bank Santander, Bank of America, and an Italian bank occupied the best positions. The Japanese Mitsubishi Financial Group turned out to be the most "green" among the Asian banks. Only those organizations whose investments in green technologies were less than 1 billion US dollars were included in this list.⁸

The Green Economy Financing Program (GEFF) operates in Georgia with financial resources and professional consultations, offering businesses to become more competitive and more economical. Green Economy Financing Facility (GEFF) is the product of the EBRD, designed to make businesses more competitive while minimizing their impact on the environment. GEFF provides finance and advice that can be used for various purposes, whether to invest in "green" technologies or finance "green" projects⁹. The program operating in Georgia was created by the European Bank for Reconstruction and Development (EBRD) and is supported by the Green Climate Fund (GCF) and the Austrian Federal Ministry (BMF). The purpose of the program is to sup-

port the green economy, and its fund in Georgia is 57.75 million USD, which is distributed through local financial institutions. Here are the predetermined investments, which are given in the table of contents of green technology.

A good example is the "Museum" hotel located in the historical building in the heart of Tbilisi, where the noble Orbelian family lived centuries ago. During its reconstruction, the main goal of the management was to equip the building with energy-efficient technologies. To do this, they applied to the EBRD credit line, which allowed them to purchase energy-efficient technologies. GEFF's highly qualified consulting group conducted a detailed analysis of the project, calculated potential energy savings, determined financial and technical parameters and provided recommendations to the hotel management. With an investment of \$237,000, energy use was reduced by nearly 90%. New energy-efficient technologies save 242,975 MWh of natural gas and 4,206 MWh of electricity consumption per year. The above-mentioned project is the best example of the EBRD's green investment support to the private sector. Such projects change energy consumption habits and protect the environment from pollution. The European Union and the Austrian Federal Ministry of Finance support the project.¹⁰

For banks, resource-efficient investments are becoming more and more important. For example, during interviews with representatives from TBC, Liberty, and Pro-credit Bank, it was revealed that the banks had implemented a system for monitoring energy and resource consumption to enhance energy efficiency and evaluate environmental impact. This system enables the banks to continually improve their environmental impact and strive for high-energy efficiency standards. In addition, it turns out that all the materials used for the construction of the headquarters meet the high standards of energy efficiency and quality requirements of the European Union. TBC and Pro-credit Bank aim to promote green financing. The eco-loans issued are confirmed, which means the financing of energy-efficient measures, renewable energy technologies and any activity friendly to the environment. Currently, with the support of the Renewable Energy Development Association (GREDA) and TBC Bank, private companies in the field of renewable energy, in cooperation with international financial institutions, are promoting access to financing.

8 <https://www.bloomberg.com/news/articles/2023-02-28/natwest-tops-ranking-of-banks-backing-green-energy-bnef-says#xj4>

9 <https://www.tbcbank.ge/web/en/geff-project>.

10 <https://ebrdgeff.com/georgia/projects/georgian-museum-hotel>

An important indicator for our research is the industrial sector, which has a major impact on air quality. The specific management decisions of the "Heidelberg Cement-Georgia" cement plant are interesting. According to their information, in terms of the social responsibility of green investing, eco-friendliness, elimination of ecology problems, and climate protection are important issues for reducing emissions and the impact of the enterprise on the environment. Every year, the company tries to protect and promote flora and fauna at its quarries and ensures biodiversity management, both during and after mineral extraction. Despite the observance of the standards, it should be noted that according to the population, the dust particles emitted from the factory are quite large, causing problems and constant dissatisfaction for the population.

A wide spread of international standards for business means that the manufacturer can develop and offer to customers products and services that meet internationally recognized requirements in the respective sectors. ISO standards are based on basic management requirements in the tourism sector and are integrated into existing quality management systems. International standards contribute to the development of trade between countries and make it fairer. ISO: a global network of national standards bodies. It could be about making a product, managing a process, delivering a service or supplying materials – standards cover a huge range of activities. Standards are the distilled wisdom of people with expertise in their subject matter and who know the needs of the organizations they represent – people such as manufacturers, sellers, buyers, customers, trade associations, users or regulators. By 2023, ISO has developed more than 6,000 standards that are closely aligned with the goals of sustainable development.

ISO 9001 sets out the criteria for a quality management system and is the only standard in the family that can be certified (although this is not a requirement). It can be used by any organization, large or small, regardless of its field of activity. In fact, there are over one million companies and organizations in over 170 countries certified to ISO 9001. This standard is based on a number of quality management principles, including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement. These principles are explained in more detail in ISO's quality management principles. Using ISO 9001 helps ensure that customers get consistent,

good quality products and services, which in turn brings many business benefits.¹¹

The object of our research is the enterprise "Kula", which has received the food safety certificate ISO 22000, confirming the production of international quality products. In this regard, it is also an interesting enterprise, a spice enterprise, which was created in 2020 during the pandemic and produces 18 types of spices. It is important that the European international standard, the system of hazard analysis and critical control points (HACCP) has been implemented in the enterprise. The ISO quality management certificate is primarily about trust and customer orientation, and it does not matter if this customer is in Georgia or abroad. Since the ISO standard is international, it often serves as a pass for the company to one or another international exhibition.

Businesses operating in any sector can use green technologies. In general, any business can make a green investment, regardless of its activity, whether it is a supermarket chain, a hotel, food production or a fitness center. The main thing is to evaluate the benefits in the long term.

Today, waste recycling is already a standard practice worldwide. Most people know that paper, metal, and glass can be recycled and reused, also materials such as oil batteries, "cell" phones, computers and even car parts. Not so few companies are working in this direction in the world. It is known that waste management is related to climate change in many ways. Greenhouse gases mainly consist of methane produced by the decomposition of organic waste. During waste processing and incineration, greenhouse gases, carbon dioxide and other pollutants are released. On the other hand, waste management may also play a positive role by generating energy and other indirect benefits from waste. A waste management code was developed in Georgia. The Waste Management Code is, in many ways, related to climate change issues. The sector's greenhouse gases mainly consist of methane produced by the decomposition of organic waste. However, in this regard, there are many issues to be resolved in the country.

When we talk about investing in green technology, there is a whole picture to consider. There are often cases where local businesses do not have enough information about the benefits that green technologies bring. For example, for the manufacturer, along with the reduction of production and operating costs, green tech-

11 <https://www.iso.org/iso-9001-quality-management.html>

nology means an increase in product quality, increased productivity and an expansion of the product range, as well as an increase in product reliability and an improvement in working conditions. We need successful projects, making green choices, a path to energy efficiency, energy-efficient buildings in accordance with local legislation, and preparing for future climate change.

CONCLUSION

The direction of the country is important, with different approaches and green models, where it is considered that the economy is a part of society, and society is a part of nature. Tourism is an industry dependent on the environment. Today there are many challenges in terms of sustainable tourism development. It is necessary to develop a strategy that takes into account international standards, and it is necessary to facilitate the implementation of reforms in a way that positively affects the sustainable development of the economy. The green economy is not an abstract concept but a reality.

A model of economic development based on knowledge of sustainable development and ecological economy should be introduced. A green economy creates green jobs, ensures real, sustainable economic development and reduces environmental pollution, climate change, environmental degradation, and the threat of resource depletion. It encourages businesses to produce green products and services. "It's easy to forget,

but our existence depends on nature. Nature gives us the basic resources to build our society, healthy soil that gives us food and raw materials for buildings and clothes, clean water we drink and clean air we breathe. This is what we call "natural capital".¹²

Tourism should be considered in terms of environmental sustainability, with "eco-friendly" hotels, natural energy sources, protected areas, and responsible companies that control waste, water quality, and also inseparably consider environmental sustainability, sociocultural sustainability, and economic sustainability. The hospitality industry should set science-based carbon reduction targets. Green leasing, which removes barriers, will mutually create a new path to profitable, sustainable investment. Standardization, as a way to improve the quality of hotel and tourist accommodation services and support the economic development of the regional tourism industry, ISO Tourism and related services. Any business, regardless of its activity, can make a green investment. Taking measures in the industry, which will be adapted to the reduction of low-carbon industrial emissions adapted to the climate goals, should be encouraging innovative technologies and services, organizations that need a large amount of electricity, be it a hotel, an enterprise, the right solution would be a hybrid plant, the use of wind, solar plant, depending on their geographical location.

¹² <https://csrgeorgia.com/ka/international-standards/20201204094030-un-global-compact>

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