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A B S T R A C T

of the dissertation for the degree of Doctor of Philosophy

**ASSESSMENT OF THE SUSTAINABLE DEVELOPMENT
POTENTIAL OF THE SOUTHERN REGION OF
AZERBAIJAN**

Specialty: 5902.17 – Management of sustainable development

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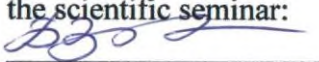
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GENERAL CHARACTERISTICS OF THE WORK

Relevance of the topic and degree of elaboration.

Sustainable development and its evaluation play the main background role in the formation of the policy of all the countries of the world. In general, sustainable development is defined as the coordination of economic, environmental, and social development to balance intergenerational well-being and maximize overall intergenerational well-being. Therefore, the aim of the study is to assess the sustainable development potential of the southern region of Azerbaijan from the point of view of integration of economic, ecological and social dimensions, and then better monitor the state of sustainable development.

Ensuring sustainable development is one of the important priorities of the government of Azerbaijan. Sustainable development in itself includes comprehensive and diversified development of the country's economy, establishment of social sectors on innovative bases. In the economic framework, the continuous and sustainable development of the country is supported by investing large investments in the non-oil sector at the expense of oil sector revenues. State programs approved by Mr. President Ilham Aliyev aim to ensure sustainable development of regions. Implementation of state programs in a logical sequence increases economic activity, social construction, and raises the quality of living in the regions. Such positive economic and social processes lead the country to continuous progress.

First Vice President Mehriban Aliyeva played a great role in supporting President Ilham Aliyev in implementing the ideas of the founder of the independent Azerbaijan state, National Leader Heydar Aliyev. He also had unparalleled services in introducing Azerbaijan to the world, raising the humanistic traditions and ideas of the Great Leader with great perseverance and loyalty. The Heydar Aliyev Foundation, headed by Mehriban Aliyeva, made important contributions to the support of President Ilham Aliyev's initiatives.

Today, sustainable and sustainable development in Azerbaijan takes place with the purposeful and result-oriented policy of the state.

In "Azerbaijan 2030: National Priorities for Socio-Economic Development" approved by the order of Mr. President Ilham Aliyev, we see that the human factor is highly valued and the further improvement of the people's well-being is always kept in mind. The document defines priorities for the development of market economy, competitive economic system, inclusiveness, protection of the sustainability of the society built on the principles of social justice, competitive human capital, reintegration of territories freed from occupation, and acceleration of reconstruction works.

Ensuring sustainable development in the Lankaran-Astara economic region of Azerbaijan is inextricably linked with a complex of multifaceted factors that include both socio-economic and natural-ecological aspects. The sustainable development of this region represents a complex process aimed at solving regional population problems, creating a balance between socio-economic progress and environmental protection, and improving the living conditions of the region's residents.

When organizing sustainable development strategies, it is important to take into account the unique economic characteristics of the region, the social structure and the different way of thinking of the population. Considering that the Lankaran-Astara economic region consists of different geographies, from plains to mountainous areas, and each has different needs and limitations.

The topic of the dissertation is of great relevance, because it aims to evaluate the sustainable development potential of the Southern region of Azerbaijan. In the dissertation, the author Alakbarov U.,¹ Rajabli H.,² Huseynov S.,³ Ahmadli TM,⁴ Garibova

¹Alakbarov U. "Improving personnel potential for sustainable development: Azerbaijan model" 2018 – 68 p.; Alekbarov U. Basics of management of sustainable development and ecological civilization. - Baku: "Education" - 2017 - 176 p.; Alakbarov U. Basics of sustainable human development and ecological civilization. Textbook for higher schools. Baku, "Education" - 2013 - 224 pages; Alekbarov U. Basics of human development. Textbook for higher schools. Baku, "Azpoligraf" - 2016 - 280 p.

²Rajabli H., "Management of social spheres", "Baku Printing House" ASC, Baku - 2022 - 396 pages.

E., Rustamova V.,⁵ Mammadov H.A.⁶ Talibov S.A.,⁷ H.M. Tahirova,⁸ Shekaraliyev A.S.,⁹ Pashayev N.A., Agakishiyeva GR,¹⁰ Safarov R.,¹¹ benefited from the works of researchers such as Sakit Huseynov's book "National economy: modernization and sustainable development" was used during research on the topic. Various aspects of sustainable development are widely covered in the works of foreign researchers. Khalid, AM, one of the western researchers studying socio-economic aspects of sustainable development.¹²

³Huseynov S. "National economy: modernization and sustainable development"-2012-89

⁴Ahmadli TM, Mammadzadeh E., "Study of physico-chemical changes and erosion trends in the soil types of Lankaran-Astara regions" // Journal of Science and Innovative Technologies Number - 26 - 2023 - 12p.

⁵Garibova E., Rustamova V., "Social aspects of internal migration and urbanization in Azerbaijan", Analytical report // Azerbaijan Barometer No. 2, Social Research Center - 2020 - 72 pages.

⁶Mammadov H.A. The concept of sustainable development and its characteristics // NSU, Scientific works. Social science series. Nakhchivan: Gayret Publishing House - 2014 - No. 9(65) -136

⁷Talibov S.A., "Investments affecting the development of tourism in Lankaran-Astara economic-geographic region" // Baku University News, #4 Natural sciences series - 2015 -148 p.

⁸Tahirova HM, "Settlement of rural population and demographic development characteristics in Lankaran-Astara economic-geographic region", Geography and natural resources - No. 2 (14) - 2021 - 71 pages.

⁹ Shekaraliyev A.S. Economic policy of the state: Celebration of sustainable and sustainable development. Monograph. Baku: University of Economics - 2011

¹⁰Pashayev N.A., Agakishiyeva GR Geography of the Republic of Azerbaijan. — Baku- 2015. — 400 c.

¹¹ Safarov R. The essence of sustainable development and a brief analysis of global initiatives on it. Baku, "Statistical News". Scientific and practical magazine - No. 3/ - 2016 - 2, volume - 22 p.

¹²Khalid, AM, Sharma, S., and Dubey, AK Data Gap Analysis, Indicator Selection and Index Development: A Case for Developing Economies. Soc. Index Res. – 2020 – 148. – doi:10.1007/s11205-019-02225-6

Emission J.G.¹³ Allen, C., Metternicht, G., & Wiedmann, T.¹⁴ and others can be mentioned.

Breuer, A., Janetschek, H., & Malerba, D. "Translating sustainable development goal (SDG) Interdependencies into policy advice: Sustainability"¹⁵ was used in the scientific research. The book discusses contemporary sustainable development activities and emphasizes the importance of an equitable, people-centered policy framework in promoting sustainable development. The ex-ante evaluation of achieving sustainable development goals by Campagnolo, L., Carraro, C., Eboli, F., Farnia, L., Parrado, R., & Pierfederici, R.¹⁶, Collste, D., Pedercini, M., & Cornell, SE, "Policy coherence to achieve the SDGs: Using integrated simulation models to assess effective policies"¹⁷ book called Khalid, AM, Sharma, S., and Dubey, AK" Data Gap Analysis, Indicator Selection and Index Development: A Case for Developing Economies" by¹⁸ was used in the research conducted on the topic of the scientific research.

¹³Emissions JG (2017). Trading contract and its regulation. Journal of Chongqing University (Social Science Edition) – 2017 – 84.

¹⁴Allen, C., Metternicht, G., & Wiedmann, T. (2018). Prioritizing SDG targets: Assessing baselines, gaps and interconnections. Sustainability Science – 2018 – 14(2) – 421–438 – doi: 10.1007/s11625-018-0596-81

¹⁵Breuer, A., Janetschek, H., & Malerba, D. "Translating sustainable development goal (SDG) Interdependencies into policy advice: Sustainability" Sustainability 2019, 11(7), 2092; <https://doi.org/10.3390/su11072092>

¹⁶Campagnolo, L., Carraro, C., Eboli, F., Farnia, L., Parrado, R., & Pierfederici, R. "The ex-ante evaluation of achieving sustainable development goals", *Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement*, 2018, vol. 136, issue 1, No. 5, 73-116 DOI:10.1007/s11205-017-1572-x

¹⁷Collste, D., Pedercini, M., & Cornell, SE "Policy coherence to achieve the SDGs: Using integrated simulation models to assess effective policies" 2017;12(6):921-931. doi: 10.1007/s11625-017-0457-x

¹⁸ [Khalid, AM, Sharma, S., and Dubey, AK](#) by "Data Gap Analysis, Indicator Selection and Index Development: A Case for Developing Economies" *Social Indicators Research* (2020) 148: 893–960. *Social Indicators Research* (2020) 148: 893–960. <https://doi.org/10.1007/s11205-019-02225-6>

Assessing the impact of UN global programs on sustainable development processes UN sustainable development reports¹⁹, was studied based on the declarations and resolutions of the UN General Assembly, the World Economic Forum and other structures of the UN. National voluntary reports on sustainable development were reviewed in terms of assessing progress towards achieving sustainable development goals in the Republic of Azerbaijan. The analysis of the scientific literature on the topic under consideration showed that various aspects were studied by Azerbaijani and foreign authors, but the topic "Assessment of the sustainable development potential of the southern region of Azerbaijan" was not analyzed in this compilation.

The object and subject of the research. The object of the study is international principles of sustainable development, programs and strategic roadmaps for ensuring the sustainability of the Southern region in Azerbaijan. The subject of the study includes the assessment of the development dynamics of the Southern region of Azerbaijan, the determination of development indicators, the analysis of the work done to ensure sustainable development, the review of the factors that shape the concept of sustainable development in the Southern region of Azerbaijan, social and economic statistical researches for the region.

The goals and objectives of the research work. The purpose of the research work is to determine the aspects of sustainable development of the Lankaran-Astara economic region of the Republic of Azerbaijan, taking into account the economic, social and ecological opportunities of the country, and to develop strategic directions for the sustainable development of the region in the context of investment attractiveness. The special importance of the issue of determining the role of investment attractiveness in the socio-ecological and economic aspects of regional development, as

¹⁹The Sustainable Development Goals Report 2024,
<https://unstats.un.org/sdgs/report/2024/The-Sustainable-Development-Goals-Report-2024.pdf>

well as the relevance of the topic of the work, determined the selection of the goals and objectives of the dissertation.

In order to achieve the goal of the research work, the following tasks were solved:

- to consider the evolution of different approaches to the study of the "economic space" category, to systematize the main features of the region during the reproduction process;

- to reveal the essence and content of the concept of sustainable development of the region from the point of view of its social, economic and ecological aspects, to justify the possibility of ensuring social-ecological and economic balance;

- to determine the list of sustainable development indicators of the southern region, to assess the sustainable development potential of the regions;

- to provide a detailed analysis of the features of socio-economic trends occurring in the territorial economies of the south of the country within the framework of their sustainable development factors in accordance with the established values and goals;

- studying the dynamics of investment processes and the degree of investment activity of regional economic systems, taking into account the characteristics of the conditions of economic activity of the Southern subjects of the country;

- to assess the sustainable development potential of the Southern region based on the answers to the survey by organizing an interview with the relevant state institutions, to search for solutions to the existing problems and to determine the development prospects of the region in the social, economic and ecological spheres.

Research methods. Economic-statistical, comparative-analytical methods, modeling, interview, expert analysis theory, systematic approach, survey, statistical materials analysis methods were used in order to ensure the reliability of the results obtained in the dissertation work at different stages of the research.

Main clauses defended.

- In accordance with the overall national development strategy, the Republic of Azerbaijan implements a policy that allows achieving high results in the field of sustainable development of the

Lankaran-Astara economic region, socio-economic and humanitarian development, and ensuring security in a short period of time from a historical point of view. This process is based on the sustainable development of the Lankaran-Astara economic region, on the basis of investment in various fields, on the mechanisms of developing strategic directions for the sustainable development of the region.

- The impact of sustainable development initiatives for the region, the existence of indicators or measurement systems in use, specific policies and strategic plans currently being implemented to promote sustainable development, the main obstacles facing the region in achieving sustainable development goals, how the challenges are being addressed by government organizations and academic institutions. , as well as questions were asked to state institutions to obtain more information about future goals for ensuring sustainable development, separately for the southern regions, and currently the situation related to these issues has been accurately studied.

- The socio-economic measures carried out in the Lankaran-Astara economic district were developed in accordance with the values and goals supporting sustainable development and the general national development strategy of the Republic of Azerbaijan.

- The highly effective state policy in the direction of the formation of sustainable development factors of the Southern region of the Republic of Azerbaijan has been confirmed by the positive statistical results obtained in the social and economic sphere.

- The optimal priorities of the sustainable development of the Southern region of the Republic of Azerbaijan were justified, and the analysis of the process of transition to a sustainable state was achieved in order to increase the efficiency of the socio-economic development.

- In order to monitor the development dynamics of social and economic areas and assess the environmental situation in the Lankaran-Astara economic region, a survey and interview was organized with the relevant state institutions. Based on the answers to the questions addressed in the interview, important results were obtained regarding the current state of development in the Lankaran-

Astara economic region in various fields, the speed of development, the factors slowing down the development, and the potential of the sustainable development of the region, and relevant proposals and recommendations were put forward.

- Based on the last analysis, it can be concluded that ensuring sustainable development in the Lankaran-Astara economic region, which is considered the southern region, will affect the overall development of the country and will lead to the impact of this progress on the neighboring regions.

Scientific novelty of the research. Based on the systematization, analysis and processing of existing empirical, theoretical, methodological and informational materials, the results and proposals related to the scientific innovation of the research were drawn up:

- within the categories considered in the economic literature, a list of indicators evaluating the process of sustainability of territorial economic systems development was defined;

- sustainable development goals and their relevance for Azerbaijan and the region were presented in terms of the formation of an inclusive society, assessment of development potential based on investment in infrastructure areas of the Southern region;

- assessment of the potential of sustainable development of the region, indicator and monitoring system of sustainable development in the Southern region, analysis and evaluation of the sustainable development of the Southern region by regions were carried out.

Theoretical and practical significance of research work. The theoretical importance of this research is that it can be used to study the most promising sectors of the region from an economic and geographical point of view, to determine the advantages of the concept of sustainable development, to create sustainable development potential and to analyze the dynamics of sustainable development of leading industries in the region, and to prepare reports. Determining priorities for sustainable development in the region, involving all national and international partners in the process of their preparation and implementation is the most important

condition for the formation of a highly competitive concept of sustainable development.

The practical importance of the dissertation research can be used in the development of theoretical and methodological provisions in the study of the sustainable development process of the Southern region.

Research approval and application. The main theoretical propositions and practical proposals of the dissertation are reflected in 6 scientific articles published by the author, scientific-practical conferences and the author's reports. Articles published by the author: National Committee of the Republic of Azerbaijan for UNESCO - Man and Biosphere (MaB - UNESCO). Works of the Azerbaijan National Committee. The title of the article is "Regional features of sustainable development"; "Caspian" Geopolitical Research Center - Geostrategy. The title of the article is "Sustainable development as an interaction between society and nature"; Academy of Public Administration under the President of the Republic of Azerbaijan - Public administration: theory and practice. The title of the article is "Sustainable development policy in the southern region of Azerbaijan"; Foreign magazine - Вопросы Истории. The title of the article is "Perspectives for the implementation of the goals of sustainable development in the Southern region of Azerbaijan"; Odlar Yurdu University - Scientific and Pedagogical News of Odlar Yurdu University. The title of the article is "Using Sustainable Development Indicators to Achieve Effective Governance"; ANAS Institute of Philosophy - Scientific works. The title of the article is "Important features of sustainable energy supply in Azerbaijan". Environmental protection at the regional level of the Republic of Azerbaijan, Journal of Academic History and Thought.

Conference materials published by the author: online scientific-practical conference on "New stage of reforms in public administration" at the Academy of Public Administration "Political aspects of ensuring sustainable development in the Republic of Azerbaijan"; Ministry of Science and Education of the Republic of Azerbaijan Mingachevir State University - Education and Research Activities in the New Era: Realities and Challenges. "Main directions

of digitization of regional education"; Scientific work International scientific journal - XVI International Scientific Research conference. "The role of national leader Heydar Aliyev in the progress of the concept of sustainable development"; Foreign conference - Kahramanmaraş Istiklal University Faculty of Humanities and Social Sciences - 3rd International symposium of economics, business & social sciences'23 "Political Agenda Formation System of Sustainable Development Indicators"; CEO (Communication, Economy, Organization) Congress of Social Sciences - "Exploring the key features of sustainable development in the southern region of Azerbaijan".

The name of the institution where the dissertation work was performed. The dissertation work was completed at the "Sustainable development planning and management" department of the State Administration Academy under the President of Azerbaijan.

Dissertation structure. The structure of the research work is determined according to the nature of the topic. Dissertation work is composed of table of contents, introduction, 3 chapters, conclusion and list of used literature. Chapters I and II consist of 4 subchapters, and Chapter III consists of 3 subchapters.

MAIN CONTENTS OF THE WORK

In the Introductory section of the dissertation, the relevance and degree of development of the topic, the object and subject of the research, the goals and tasks of the research, the methods of the research are defined, the main propositions defended, the scientific innovation of the research, the theoretical and practical significance of the research are commented, the approval of the research work and the structure of the dissertation are noted.

The first chapter of the dissertation is called "Sustainable development as a priority of the modern era" and consists of four sub-chapters. In this chapter, in the context of negative trends affecting sustainable development, the main reasons are mentioned, potential risks and factors ensuring sustainable development are examined, the path taken by the concept of sustainable development,

the relevance of sustainable development goals that support sustainable development for Azerbaijan are reviewed, the existence of an inclusive, fair and equal society is sustainable identified as the main factor in ensuring development.

The first chapter "**Sustainable development as a response to negative trends in the development of society**" In the sub-chapter, the main reasons for negative trends affecting sustainable development were considered. It is noted that for the main three reasons bIt is related to the depletion of non-renewable energy resources. The more these resources are used, the more they are proportionally reduced and depleted. The second reason is related to population growth and urbanization. Due to the increase in numbers, land areas remain under buildings, roads, as well as other infrastructure facilities. Regarding urbanization, historically urbanization has been associated with significant economic and social transformations. However, there are also disadvantages resulting from the rapid and unplanned growth of urbanization, resulting in inadequate housing, poor infrastructure for water and sanitation, transport and health services.²⁰The third reason is environmental pollution and disturbance of ecological balance. Violation of the ecological balance is related to wasteful use of nature and its blessings, destruction of the soil layer, human penetration into wild nature and disturbance of its ecological balance, and other reasons.

In the sub-chapter of the first chapter called "Emergence and development of the concept of sustainable development", it is noted that the concept of sustainable development has faced various interpretations and criticisms since its inception. The Brundtland report expressed how the concept of sustainable development has different meanings and referred to integrated planning strategies,

²⁰Garibova E., Rustamova V., "Social aspects of internal migration and urbanization in Azerbaijan", Analytical report // Azerbaijan Barometer No. 2, Social Research Center - 2020 - 72 pages.

ecology, heritage conservation, biodiversity and long-term sustainable development.²¹

Sustainable development is seen as a socio-economic system that meets the needs of more people, while at the same time making long-term progress towards improving well-being and the overall quality of life within the limits of the environment. The basic essence of the concept is unchanged. Thus, the process of sustainable development allows meeting the needs of the present generation without any negative impact or damage to the needs of future generations. In the semi-chapter, it is noted that in the post-pandemic and post-war period, Azerbaijan is entering a new stage in the process of sustainable development, and this strategic period covers the years 2021-2030. The country's long-term socio-economic and ecological development vector is determined by the government of Azerbaijan based on global trends and global challenges.

In the sub-chapter of the first chapter called "Sustainable development goals and their relevance for Azerbaijan and the region", it is noted that the world situation in the field of sustainable development was discussed at the 70th Anniversary Assembly of the UN in September 2015. With sustainable development as a global priority, the 17 goals planned to be implemented by 2030 cover various economic, social, ecological and humanitarian aspects. Since the countries of the world have different levels of development, their goals in the field of sustainable development can also be different. The goals of sustainable development, which form the basis of inclusive development, can be grouped according to their meaning and importance.²²

The state of Azerbaijan has defined five national priorities, which include long-term progress paths in the direction of the country's socio-economic improvement and environmental protection, in the following order: 1) stable growing competitive

²¹Alekbarov U. Basics of sustainable human development and ecological civilization. Textbook for higher schools. Baku, "Tahsil" - 2013 - 224 pages.

²²Azerbaijan - 2030. From Millennium Development Goals to Sustainable Development Goals. Voluntary national report – 2017 – 80 p.

economy; 2) a society based on dynamic, inclusive and social justice; 3) competitive human capital and space for modern innovations; 4) a large return to the territories freed from occupation; 5) clean environment and "green growth" country. It is for this purpose that "Azerbaijan 2030: National Priorities for socio-economic development" was approved.²³

The last sub-chapter of the first chapter called "Building an inclusive society as a priority for the country and the region" emphasizes that by developing inclusive societies that are stable, safe, fair and tolerant, that respect diversity, equal opportunities and the participation of all people, including disadvantaged and vulnerable groups and individuals it is possible to promote social integration. The sub-chapter explains the important categories based on the hierarchical form that makes possible the promotion of social inclusion. The work done to ensure social inclusion in our country is discussed and the main factors are indicated. As a result of this, the country has become a leading state in the field of inclusive development, which is the main global priority of our time. Inclusive development is a management method when the country develops comprehensively and the positive results of this process are felt by all citizens. The inclusive development process in Azerbaijan is the result of the implementation of President Ilham Aliyev's deeply thought-out state management strategy.

The second chapter of the dissertation is called "Sustainable development management" and consists of four subchapters. In this chapter, indicators of sustainable development are reviewed, the current situation and prospects of the sustainable development process in the southern region are discussed.

In the sub-chapter of the second chapter called "Indicators of sustainable development", sustainable development is reflected as a long-term transformation process that takes place in the economic, social and ecological spheres. The goals of the UN General

²³Azerbaijan 2030: National Priorities for socio-economic development. <https://president.az/az/articles/view/50474>.

Assembly and the World Summit to achieve the Sustainable Development Goals by 2030 are increasing in number. All these goals are part of the 17 approved goals. Addressing different issues and challenges may be important in different countries aiming to create sustainable societies. In addition, the existence of universal indicators is important to ensure sustainable development.

In the sub-chapter "Evaluation of the sustainable development potential of the region" of the second chapter, it is stated that natural resources, labor resources, economic-geographical space with various service areas act as the main part of the social, economic and environmental management structure of the regions. Regional development forms the basis of the socio-economic development strategy and is one of the priority directions of the state policy.

Infrastructure construction in Lankaran-Astara region was successfully continued within the framework of State Programs. The quality of communal services has increased, new power plants have started operating, the gasification process has been accelerated in regions and villages, work has been done to solve the problem of drinking water supply to the population, new roads have been built or reconstructed. In the southern region, the goals of creating intensive horticulture in the agricultural area, increasing modern tea plantations, and expanding the activities of the agropark are being implemented.

In the sub-chapter "Indicator and monitoring system of sustainable development in the southern region" of the second chapter, it is mentioned that the Lankaran-Astara economic region is one of the regions with the highest agricultural potential of Azerbaijan due to its climate and soil characteristics. In order to encourage the development of the non-oil sector, the processes that stimulate the development of the industry have been intensified. In this direction, continuous work in the field of horticulture for the development of agriculture in Astara region, planting citrus groves, increasing production in paddy cultivation, expanding the agropark for the development of animal husbandry in Jalilabad region, improving production in agricultural fields such as potato growing and grain growing, potato growing and beekeeping in Lerik and

Yardimli regions, Lankaran and Masalli regions the increase of tea plantations, the development of citrus horticulture and the improvement of the material and technical base enabling this development are planned.

In order to develop the indicator system of sustainable development in the Lankaran-Astara economic region, it is important to create a single system that includes the considered factors. This system should focus on the development trend of the region by comparing it with previous years, investigate the factors that will hinder development, evaluate the current situation by analyzing statistical data, and determine future prospects.

The analysis of demographic indicators, which act as one of the main factors of sustainable development, in the sub-chapter of the second chapter called "Analysis and evaluation of the sustainable development of the Southern region by regions" shows that the largest population belongs to the Lankaran region (231639 people), and the least to the Yardimli region (69446 people). . According to the latest statistics of 2022, the population of the economic district is 930.6 thousand people, and the rural population is predominant compared to the urban population.²⁴

In order to strengthen the social protection system in the Lankaran-Astara economic district, measures to support low-income families, provision of social benefits, measures to improve the indicators of communal services, provision of housing, measures to expand housing construction at the expense of private capital have greatly improved the living conditions of the population. In the semi-chapter, along with social and economic issues, attention was paid to the factors leading to environmental problems in the southern region. In the southern region, social, economic and environmental statistical data were recorded and comparisons were made.

The third chapter is called "The main directions of sustainable development of the Southern region" and consists of three sub-

²⁴Information of the State Statistics Committee of the Republic of Azerbaijan
<https://www.stat.gov.az/source/regions/>

chapters. This chapter reflects the economic, social and environmental aspects of sustainable development in the southern regions. The chapter reflects surveys organized to better analyze the sustainable development of the southern region in social, economic and environmental directions.

In the sub-chapter of the third chapter called "Economic aspects of the sustainable development of the Southern region", it is shown that one of the most important factors determining economic stability and sustainable development is the elimination of dependence on imports, the satisfaction of domestic demand and the expansion of the volume of exports. Raising local production to a high level in the southern region and providing support for the development of various economic sectors increases the economic development potential. Agriculture occupies a key place in the aspect of economic development in the Lankaran-Astara economic region. It is noted that the increase of tea plantations, the development of grain growing, citrus growing and horticulture, and attention to cattle breeding ensure the economic development of the region.

In the sub-chapter of the third chapter called "Social potential of sustainable development in the Southern region" statistical analysis of the demographic indicators for the region during the last years is provided. At the same time, the statistics of the last years regarding pensioners and persons receiving social benefits were reflected.

Within the framework of social aspects of sustainable development, information was provided on the work done in the direction of education and skills development in the region. Thus, issues such as the construction of new educational institutions in the southern regions, as well as repair and restoration works, improvement of the material and technical base in educational institutions, and provision of modern equipment were touched upon.

The problem of drinking water supply in Lankaran-Astara economic region has existed for a long time. However, the works carried out in the field of land reclamation in recent years have eliminated this problem in various regions. It has become possible to provide the population with quality and sustainable drinking water.

In order to better define the general situation in the direction of social development in the southern region, the results obtained on the basis of the answers to the interview questions addressed to the state institutions regarding issues such as population demand, internal migration, and on the basis of the survey addressed to the tourism enterprises for the purpose of studying the social development opportunities of the region are mentioned in the sub-chapter.

In the sub-chapter of the third chapter called "Environmental problem and environmental protection in the Southern region", the drastic reduction of forest resources is emphasized as a global environmental problem. In the Lankaran-Astara region, the increase of planting and garden areas for the development of agriculture has led to the reduction of forest areas, and chemical substances used for production have caused chemical pollution. At the same time, in the areas where tourism is developed, there is pollution of the running water and the soil in the surrounding areas due to various wastes. In areas where forests have been cut down, the soil is subjected to more erosion, fresh water pollution, discharge of waste water into the sea and rivers, lack of planting of trees in vacant areas, including in cut-down forest areas, make the ecological situation even more difficult. In the sub-chapter, certain proposals for the protection of fresh water resources, prevention of water pollution and pollution of the environment with waste are shown.

The results, proposals and recommendations obtained at the end of the research are reflected in the Conclusion part of the dissertation as follows:

The development of regions in our country, including the southern region, is one of the highlights in recent years. Natural growth, continuous economic and socio-cultural development is evident in Lankaran economic region. It should be noted that the sustainable development of a region directly depends on the progress of the administrative territories included in it. From this point of view, the development of Lankaran-Astara economic region characterizes the rise of Lankaran, Lerik, Masalli, Yardimli, Jalilabad and Astara administrative regions.

Increasing the fields of grain growing, viticulture, vegetable growing, tea growing and citrus growing in agriculture, and developing animal husbandry increases employment opportunities and creates a foundation for sustainable economic development in the region. Providing state support to entrepreneurs, granting concessional loans, and creating conditions for the application of modern technologies in the agricultural field are particularly important for this field. In the process of development of the agrarian field, the damage to the environment and soil, the decrease in the number of workers due to urbanization, as well as the low promotion in the domestic and foreign markets are among the problems that need to be solved.

Increasing attention to the tourism sector, which supports the sustainable economic development of the region as the main source of income, expanding public-private cooperation, building hotels in areas suitable for tourism, doing work to attract staff, promoting cultural heritage, continuously organizing tours within the framework of ecotourism, and attracting investors in the southern region. has led to progress in the field of tourism.

An increase in the activity of service areas is observed in the southern region. Changes in the health care system, provision of new technological equipment and other such issues reflect the rise of the medical service sphere in the region. In order to develop education in the region, based on the initiative of Mr. President Ilham Aliyev and First Vice-President Mehriban Aliyeva, new preschool educational institutions, including secondary educational institutions, were built in the region, and old school buildings were renovated. The existence of only one university in the region creates difficulties for students. In this regard, increasing the number of higher education institutions in the region is considered essential. It should be noted that the education of local students in their regions without incurring additional costs will positively contribute to the formation of personnel potential for the region, and will reduce population growth in the capital to some extent. At the same time, foreign students coming to Azerbaijan to study will choose a higher education

institution in the regions, which will make an important contribution to the development of these regions.

In order to eliminate environmental problems, it is important to prevent water and environmental pollution in the southern region, especially in the areas where tourism facilities and agricultural fields are located, recycling, economical use of natural resources, and continuous implementation of tree planting actions and educational measures.

In general, measures are being taken to promote sustainable development in the Lankaran-Astara economic region. Thus, these measures are implemented by the state, non-governmental organizations, and even international organizations. An example of this is the "Program of support of the European Union to the Lankaran region of Azerbaijan". On the part of our state, the economic region is being developed as part of the socio-economic development programs of the regions.

The following suggestions and recommendations can be put forward to ensure the sustainable development of the southern region:

- Studying the world experience of sustainable development and using it in the development of the region. It is important to investigate the effectiveness of new technologies in social infrastructure, economic areas, and environmental security and to apply them in the regions. Economically, the use of innovative technologies in service areas and agriculture can bring great results for overall development.

- Attracting investments to sectors that play a decisive role in the development of the region. The tourism sector plays an important role in the Lankaran-Astara economic region, so foreign and domestic investments should be attracted to the development of this sector, and tourism enterprises should be developed. In particular, the involvement of foreign companies in the development of the local tourism sector can also affect the expansion of international relations.

- Increasing attention to increase the quality in the tourism sector, which is the main source of income, taking into account the high tourism potential of the region. In this direction, the

involvement of specialized personnel with knowledge in the field of tourism and foreign language skills, organization of hotels based on modern standards, improvement of transport infrastructure in tourist regions, expansion of the organization of tours for local and foreign tourists will ensure sustainable development in this area.

- Opening of new logistics centers, cold warehouses, supply points for the development of agriculture in the southern region. The lack of logistics centers and warehouses that allow year-round storage of agricultural products creates difficulties. It is considered appropriate to eliminate these shortcomings.

- Protecting domestic markets for the sale of agricultural products, increasing the number of export markets. In our opinion, the creation of an authorized institution for ensuring access to markets and solving problems in this direction will increase the sales promotion of agricultural products in domestic and foreign markets.

- To increase productivity in agriculture, irrigation systems should be increased, new irrigation lines should be created. Poor water supply of cultivated fields and gardens reduces productivity. To solve the problem, we can mention that rainwater collected in water reservoirs can be used in agriculture to meet the demand for irrigation water.

- Organization of new higher education institutions for the development of the education sector. This is convenient for both local students and students from foreign countries, and it can lead to an increase in the personnel potential of the region and an increase in jobs.

- For the development of the healthcare system, new medical centers and clinics should be created, especially in villages, and technological equipment used in the field of medicine should be imported from foreign countries. Considering the weakness of medical services in rural areas, it is important to emphasize the importance of establishing new modern hospitals to facilitate people's access to health services.

- Creation of a single sewage system in many areas of the region for sanitary purposes. Although a lot of work has been done in the southern regions to solve the problem, this problem has not yet

been fully solved. In many areas of the region, there is a need to install a centralized sewage network and waste water treatment facilities.

- **The creation of a system related to the services and concessions provided to business entities in the region will ensure the continuous development of business activity.** Increasing the volume of concessional loans and ensuring the interests of entrepreneurs will increase employment opportunities for young people and prevent migration to cities.

Finally, let us note that the sustainable development of the Lankaran-Astara economic region plays an important role in the overall development of the Republic of Azerbaijan.

The main content of the research is reflected in the following published scientific works of the author:

1. Tahirli F.I. The role of the national leader Heydar Aliyev in the progress of the concept of sustainable development, Science International scientific journal - XVI International scientific research conference, November 8, 2023, Volume XVI, ISSN 2663-4619
https://aem.az/uploads/files/2023-12/1703826187_xv-bek.pdf
2. Tahirli F.I. Political aspects of ensuring sustainable development in the Republic of Azerbaijan. Conference material. Online scientific-practical conference 2020 Protocol No. 1 on "New stage of reforms in public administration" at the Academy of Public Administration <https://dia.edu.az/ru/arxivlar/4654>
3. Tahirli F.I. Environmental protection at the regional level of the Republic of Azerbaijan, Journal of Academic History and Thought, 11 (3), 2024, ISSN: 2148-2292 <https://dergipark.org.tr/tr/pub/atdd/issue/85042/1509292>
4. Tahirli F.I. Important features of sustainable energy supply in Azerbaijan. Scientific article. ANAS Institute of Philosophy - Scientific works 2023 No. 2/41. ISSN 2219 9810 [http://scientificworks.en/elmieserler_pdf/elmi_eserler_2_\(41\)_2023/12.pdf](http://scientificworks.en/elmieserler_pdf/elmi_eserler_2_(41)_2023/12.pdf)
5. Tahirli F.I. Sustainable development policy in the southern region of Azerbaijan. Academy of Public Administration under the

President of the Republic of Azerbaijan - Public administration: theory and practice. Scientific article. UNESCO 2023 No. 03 (83). ISSN 2309-1347

<https://dia.edu.az/wp-content/uploads/2023/12/3-83-2023-272seh-.pdf>

6. Tahirli F.I. Sustainable development as an interaction between society and nature. Scientific article. "Caspian" Geopolitical Research Center - Geostrategy. March-April 2023, No. 02 (74). ISSN: 2664-4975<https://www.geostrategiya.az/pdf/2023/0274.pdf>
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9. Tahirli F.I. Main directions of digitization of regional education. Conference material. Ministry of Science and Education of the Republic of Azerbaijan Mingachevir State University- education and research activities in the new era: realities and challenges December 11-16, 2022, Volume I
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10. Tahirli F.I The role of touristic potential of Lankaran-Astara economic region in sustainable development, Lviv trade and economic university - tourism and hospitality industry in central and eastern Europe, 2023, №8, ISSN: 2786-4820<http://journals-lute.lviv.ua/index.php/tourism/article/view/1316/1242>
11. Tahirli F.I Exploring the key features of sustainable development in the southern region of Azerbaijan. Conference material CEO (Communication, Economy, Organization) Congress of Social Sciences 2023, VIII, ISBN: 978-625-98685-0-9
<http://congress8.ceocongress.org/tr>

12. Tahirli F.I Political Agenda Formation System of Sustainable Development Indicators. Conference material. Kahramanmaraş Istiklal University Faculty of Humanities and Social Sciences - 3rd International symposium of economics, business & social sciences'232023III, ISBN 978-975-93937-2-
<https://www.isebuss.com>
13. Tahirli F.I. Prospects for the realization of the goals of sustainable development in the Southern region of Azerbaijan. Scientific article. Вопросы Истории - Monthly journal. 202310 (01). ISSN:0042-8779
<https://elibrary.ru/contents.asp?id=54731510>

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