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# "GREEN ECONOMIC DYNAMICS INDEX" AND ITS IMPLEMENTATION ON GENERAL ECONOMY

#### ABSTRACT

The purpose of the research is to perform a simple indexation to measure the green economy and examine how dynamically the transition to a green economy is being implemented across the country.

The methodology of the research includes indexation by mutual synthesis of 5 methods: the share of renewable energy in the country's energy infrastructure, the level of implementation of domestic and foreign environmental programs by the government, the amount of annual carbon dioxide emissions in the country, the level of sustainability in agriculture, and the circularity of the economy.

The practical importance of the research includes the assessment of more complex indexing previously proposed by other economic circles and institutions with simpler and more accessible information resources.

The results of the research include, first of all, an assessment of Azerbaijan's transition to a green economy in comparison with neighboring countries and proposals for eliminating gaps.

The originality and scientific novelty of the research lies in the application of a newer and simpler approach compared to existing indices in this field, as well as the availability of the necessary information for compiling the index.

**Keywords:** green economy, sustainable economy, indexing of green economies, green development, circular economy, green growth.

#### INTRODUCTION

Nowadays, the social, political and economic processes taking place in the world and in the region create conditions for the transition of national economies and the world economic system to a sustainable state. The implementation of international political and economic projects and initiatives that began at the beginning of the 21st century to improve the ecological situation and organize a sustainable food industry for the growing population is being carried out unevenly across the countries of the world. The reasons for this include extreme differences in the levels of development of countries, the fact that some countries build their economies on

protectionism, increasing military spending against the backdrop of geopolitical tensions, and thus diverting funds for the transition to a green economy to other directions.

In accordance with the above-mentioned cases, differences in the dynamics of the transition of countries around the world to a green economy are clearly visible. One of the main factors is to make these differences measurable and to determine where each country is in the green economy, and in general, to make the country's green economy measurable.

Since the concept of green economy emerged, many academic and economic institutions have conducted analyses and put forward various considerations for its measurability. These indices and reports include both the green economy, and the calculations related to sustainable development related to it.

#### Research and analysis

#### Existing approaches for indexing the green economy

The most well-known of the green economic indices, the Global Green Economic Index, was created in 2010 by Dual Citizen, led by Jeremy Tamani. The index compares the performance of 160 countries on 18 different indicators and produces an index between 0 and 1. 0 is the worst result and 1 is the best result [6]. According to the 2024 report, Azerbaijan ranked 114th out of 160 countries on the average of 18 different indicators. Azerbaijan's "Global Green Economic Index" was assessed as 0.448, which is lower than the world average (0.553) [6].

Another index is the Green Growth Indicators report, launched by the Organization for Economic Cooperation and Development in 2017 and last updated in 2024. The report compiles indicators such as carbon dioxide emissions, energy intensity, and product efficiency of member countries, conducts a joint analysis, and evaluates countries according to their situations [11]. Since Azerbaijan and neighboring countries in the region are not members of the mentioned organization (except Turkey), however, an analysis of Azerbaijan and the countries of the region by indicators can be conducted as follows:

- Azerbaijan Faces challenges in transitioning to a green economy due to the national economy's dependence on oil and gas exports, limited renewable energy infrastructure, and nascent environmental policies;
- Georgia Progressing in state-led decision-making in renewable energy, particularly hydroelectric power, but improvements in air quality and waste management are needed;
- Russia Rapid environmental degradation due to large-scale industrial activity, although there are federal efforts to increase energy efficiency and savings;
- Iran Has serious environmental problems such as water scarcity and air pollution, and its economy has been negatively affected by years of sanctions;
- Armenia Wants to make some progress in environmental protection, but still faces challenges in areas such as deforestation and waste management.

The next analysis is the "Global Sustainable Competitiveness Index" presented in 2012 by the "Solability" analysis center, which was established in 2005 by the Korean Swiss joint activity. The index combines 216 different indicators into 6 sub-indices, such as management effectiveness, intellectual capital, natural capital, resource intensity and efficiency, social capital, and economic sustainability, and analyzes countries. Each sub-index includes the following components:

- Intellectual Capital and Innovation: the ability to create wealth and jobs through innovation and value-added industries in globalized markets;
- Economic Resilience: Economic Sustainability and Competitiveness reflect the ability to create wealth through sustainable economic development;
- Governance Effectiveness: The outcomes of key public sectors and investments infrastructure, market and employment structures, providing a framework for sustainable and sustainable wealth creation;
- Natural Capital: the given natural environment, including the availability of resources and the rate of depletion of those resources;
- Resource Efficiency and Intensity: the efficiency of using available resources as a measure of operational competitiveness in a resource-constrained world;
  - Social Capital: health, safety, freedom, equality and life satisfaction within a country.

The result of the analysis is evaluated on a scale of 0-100. 0 is considered the worst, and 100 is the best indicator. The average index worldwide is 43. The project's goal is to increase the world average to 61.

Table 1. "Global Sustainability Competitiveness Index" of selected countries [13]

Global position	Country	Index
51	Turkey	46.84
53	Russia	46.69
59	Georgia	45.53
75	Armenia	43.77
142	Azerbaijan	38.58
168	Iran	36.23

### Green Economic Dynamics Index

Although the 3 reports and indexations mentioned in the previous paragraph conduct separate indexations on green economy and sustainability, they do not include or give very little space to other areas of the green economy, mainly agriculture and circular economy. In order to simply summarize all the components of the green economy and index the green economies of countries, it is necessary to calculate the "Green Economy Dynamics Index" in scientific work. This index analyzes the following 5 main components that form the basis of the green economy according to 5 indicators by country and offers a simpler indexation method:

- Energy index The share of green energy in the energy sector of the national economy as a percentage of total energy;
  - Up to 20% very poor (1);
  - Between 20-40% poor (2);
  - Between 40-70% average (3);
  - Between 70%-90% good (4);
  - Above 90% excellent (5).

State policy index – the state of implementation of the state's internal policy on the green economy, as well as work on the implementation of agreements concluded with foreign countries:

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AUDİT 2025, 3 (49), səh. 109-120.
AUDİT 2025, 3 (49), pp. 109-120.
AУДИТ 2025 3 (49), стр. 109-120.
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- Internal programs do not exist at all, and programs related to foreign agreements are not implemented or do not exist at all very bad (1);
- There are no internal programs, and even if they exist, they are not implemented. There are programs related to foreign agreements, but their implementation is very weak bad (2);
- There are internal programs, but they are implemented weakly (30% of total programs). The implementation of programs related to foreign agreements is at an average level average (3);
- There are internal programs, but they are implemented at an average level (up to 60% of total programs). The implementation of programs related to foreign agreements is at a high level and all obligations are being fulfilled good (4);
- Both internal programs and programs signed with foreign agreements are fully implemented very good (5).

Carbon index – the amount of annual carbon dioxide emissions. Both to the atmosphere and to other spheres:

- More than 300 million tons per year very bad (1);
- Between 150-300 million tons per year bad (2);
- Between 50-150 million tons per year average (3);
- Between 10-50 million tons per year good (4);
- Below 10 million tons per year very good (5).

Sustainable Agrarian Index – An index of average weighted values of indicators for water, land, waste and areas exposed to sustainable activities:

- Below 45 very bad (1);
- Between 45-55 bad (2);
- Between 55-65 average (3);
- Between 65-75 good (4);
- Above 75 very good (5).

Circular economy index – the percentage of products recycled during the year to the total amount of products consumed:

- Below 5% very bad (1);
- Between 5-8% bad (2);
- Between 8-10% average (3);
- Between 10-12% good (4);
- Above 12% very good (5).

Finally, the total average index is calculated for each index and adjusted according to the following criteria:

- Non-dynamic economies between 1-1.7
- Weakly dynamic economies between 1.8-2.7
- Medium dynamic economies between 2.6-3.3
- Strongly dynamic economies between 3.4-4.1
- Fully green dynamic economies between 4.2-5

With the above indices, we can calculate the "green economy dynamics index" of Azerbaijan and the countries of the region in the following steps:

First, let's start with the energy index. The following table can be used to compare what percentage of energy production worldwide in 2023 will be obtained from renewable clean energy sources.

Table 2. Percentage and index of clean energy to total energy for selected countries [7].

No	Country	Total	Hydro	Wind	Solar	Bio	Geothermal	Index
38	Georgia	76	75	0,60	0	0	0	4
79	Turkey	42	20	11	6	3	3	3
103	Armenia	28	19	0	9	0	0	2
133	Russia	18	17	0,40	0,20	0,07	0	1
167	Azerbaijan	7	6	0,30	0,20	0,40	0	1
168	Iran	6	6	0,30	0,20	0,01	0	1

30% of the world's total energy production is obtained from renewable energy sources. 14% of it is obtained from water, 8% from wind, 6% from solar, 2% from bioenergy, and 0.30% from geothermal energy sources. Since Azerbaijan receives 7% of its total energy from renewable, mainly from hydropower, it showed a "very bad" result of 1 in the energy index. The main reason for this is the "chronic" dominance of thermal power plants in the country's energy production.

The second index is an index related to state policy. It reflects both the state's programs related to environmental protection and greening the economy, as well as the work done by the state on the implementation of foreign agreements and contracts concluded by the state at the international or regional level. When analyzing the Republic of Azerbaijan and the countries of the region according to the mentioned index, we obtain the following results:

- Azerbaijan Although state programs predominate, they are implemented at an average level, and plans are only just beginning to come into force. Implementation of work on concluded international agreements is relatively good. Index 4;
- Turkey Although there are development plans by the state, they do not contain any action plans related to the greening of the country's economy and environmental safety. Although there are obligations related to international agreements, both the country's internal strategic resources and financial investments create conditions for their implementation to be very weak. Index 2;
- Georgia the country has its own green economic program, and work is being done to implement it in areas such as tourism. The situation with international agreements is unsatisfactory, as the requirements of the agreements lead to additional costs for the country's economy. In this case, the average level is considered for the adjustment of the index. Index 3;
- Russia Although the state has approved projects for the implementation of some programs and there are efforts to create a new green economy and improve the ecological situation for the future, due to the ongoing war, these works are progressing slowly and there is little funding for them. At the international level, the country actively participates in the Paris Agreement and the United Nations Convention on Climate Change. Index 3;
- Iran No programs have been announced by the state. Due to ongoing international sanctions, the country has not joined any international agreements on the green economy. Index 1;

- Armenia – plans have been announced by the state and work is underway to transition to a green economy. Reforms are being carried out in the areas of ecological development. In recent years, the implementation of agreements concluded due to rapprochement with the European Union and foreign investments in the green economy have increased. Index -4.

The third index includes the total annual carbon dioxide emissions of countries. The analysis of the Republic of Azerbaijan and countries in the region is listed below.

Table 3. Percentage and index of clean energy to total energy for selected countries [5]

No	Country	CO2 emission (million tons)	World rate (%)	Index
4	Russia	2 069,5	5,30%	1
6	Iran	778,8	2,00%	1
17	Turkey	438,32	1,10%	1
65	Azerbaijan	42,77	0,10%	4
104	Georgia	12,86	0,03%	4
124	Armenia	7,73	0,02%	5

The fourth index is called the sustainable agriculture index. The index calculates the average weighted values of the sub-indexes for the country's agricultural water (irrigation efficiency, water use, surface water use rates), land resources (agricultural land area, soil erosion, agrarian-functional unity rates), waste (agricultural greenhouse gas emissions, carbon dioxide share rates for each product in the production of cereals, rice, dairy and meat products) and areas exposed to sustainable activities using the following formula below. The result of the calculations is evaluated between 0 and 100. 0 is a worse result, 100 is a better result:

$$Index = \frac{\sum (indicator\ price\ x\ average\ weight)}{\sum (average\ weights)}$$

Using the above formula, each indicator can be calculated separately for the Republic of Azerbaijan as follows.

Starting with agriculture, we can group the sub-index of water resources in agriculture in Azerbaijan by the following indicators:

- Total irrigation efficiency in agriculture 55% [9];
- Use rate in renewable water sources 33% [10];
- Use rate in surface water irrigation 88% [1].

Due to the high rate of surface water use, groundwater use is lower, and irrigation efficiency is also above average. The average index is affected by the low rate of use of renewable water sources. Considering the above indicators, a sub-index of 60 is considered.

The second sub-index is the analysis of the state of soil resources in agriculture. They can be grouped by the following indicators:

- The total country share of land used for agriculture 55% [3];
- Soil erosion rate 43.29% [2];
- Agrarian-functional unity rates: What percentage of the land used for agriculture maintains a minimum level of natural habitat 43% [10].

Table 4.

AUDİT 2025, 3 (49), səh. 109-120. AUDİT 2025, 3 (49), pp. 109-120. AУДИТ 2025 3 (49), стр. 109-120.

The use of land for agriculture is at a normal level, and the preservation of naturalness in the territories is also at an average level. However, the high level of anthropogenic soil erosion, such as salinization, and natural soil erosion, such as desertification, reduces the overall average sub-index to 55.

The third sub-index is the share of carbon dioxide in agriculture (carbon dioxide equivalent – COE). It combines the following indicators:

- Greenhouse gas emissions from the agri-food system 17,999.2 kilotons of CEO [10];
- Emission intensity of cereals 200 grams of CEO per crop [10];
- Emission intensity of rice 2,500 grams of CEO per crop [10];
- Emission intensity of dairy products 1,200 grams of CEO per crop [10];
- Emission intensity of meat products 11,600 grams of CEO per crop [10].

The amount of carbon dioxide emitted from the production of these products in agriculture in Azerbaijan is much lower than the world average. However, the high emission intensity of meat products has a negative impact on the final average sub-index and reduces the index to 65.

The last sub-index is the index of areas exposed to sustainable activities. This index combines two quality indicators and the results for Azerbaijan are listed below:

- Proportion of Agricultural Areas in Sustainable Practices: The initial acquaintance of the Azerbaijani economy with the green economy is still slow in all areas of the transition to it. So far, such work is being carried out only on arable land in the liberated territories [12].
- Training and Support for Farmers: Training farmers for sustainable development is almost non-existent, but there are long-standing practices such as state subsidies and tax exemptions for agriculture [12].

Since this sub-index combines qualitative indicators and there are still shortcomings in the processing of some data, the index will be considered as 50.

Considering all four sub-indices, the analysis was carried out for the Republic of Azerbaijan and regional countries and the following table was prepared:

Sustainable Agriculture Index for selected countries

No	Country	Hydro	Land	Waste	Area	Total	Index
35	Azerbaijan	60	55	65	50	57,5	3
40	Georgia	58	53	60	55	56,5	3
45	Turkey	55	50	58	52	53,8	2
50	Iran	52	48	55	50	51,3	2
55	Russia	50	45	53	48	49,0	2
60	Armenia	48	42	50	45	46,3	2

As can be seen from the table above, Azerbaijan is far ahead of the countries of the region in sustainable agriculture and has found its place among the top 50 countries.

The latter index incorporates the circular economy. The circular economy is an economic model that replaces the traditional linear economic model that combines life cycles such as production, processing, consumption and waste with recycling and makes the product life cycle

circular and recyclable [14]. The most appropriate method for measuring the circular economy in a country is the "Circular Economy Gap Report" analysis put forward by the "Circular Economy Foundation" in 2021 [4]. This analysis measures the percentage of circular economy in a country using the following formula:

$$\textit{Circularity} = \frac{\textit{Quantity of Total Recycled Products}}{\textit{Total Product Consumption}}$$

Using this formula, an analysis was again conducted of the Republic of Azerbaijan and regional countries as shown in the table below:

Table 5. Circular economy index for selected countries

No	Country	Percentage	Index
32	Turkey	10,0	3
54	Georgia	8,6	3
69	Armenia	7,8	2
71	Russia	7,2	2
77	Azerbaijan	6,8	2

Azerbaijan ranked 77th out of 178 countries with an average interest rate of 6.8% on the index and was indexed with a bad (2) index. This is due to the weak initiatives related to the circular economy, as well as the very poor recycling of waste.

Considering the above analyses, the "Green Economy Dynamics Index" of Azerbaijan and the 5 regional countries was calculated with the average of each 5 indices, and is shown in the table below:

Table 6. "Green Economy Dynamics Index" of Azerbaijan and regional countries

Nº	Country	Energy	Policy	CO2 emission	Sustainable agriculture	Circular economy	TOTAL
1	Georgia	4	3	4	3	3	3,40
2	Armenia	2	4	5	2	2	3,00
3	Azerbaijan	1	4	4	3	2	2,80
4	Turkey	3	2	1	2	3	2,20
5	Russia	1	3	1	2	2	1,80
6	Iran	1	1	1	2	1	1,20

As a result of the analysis, Azerbaijan, Armenia and Georgia are considered to have medium-dynamic economies, Turkey and Russia are considered to have weak dynamics, and Iran is considered to be a non-dynamic economy. Azerbaijan clearly has an advantage over other developed neighboring countries in the region. However, it lags behind Georgia and Armenia in terms of the index. Oil dependence and low circular economy are the main factors affecting the index and making the national economy lag behind its two regional neighbors. With their regulation under state programs in the future, the national economy of Azerbaijan can transition to a highly dynamic economy

#### **CONCLUSIONS**

Geopolitical, economic and social changes taking place in the world are pushing countries to quickly become "green" and "sustainable" in their national economies. It is already evident that this process has accelerated in recent years in countries around the world and in Azerbaijan. Nevertheless, deep-rooted and chronic problems remain in the diversification of Azerbaijan's national economy and the transition to a truly green and sustainable development model.

With the "green economic dynamics index" proposed in the article, you can analyze in a simpler way the pace at which your national economies are moving towards a green economy. According to the corresponding analysis, you can more easily identify and work out which of the five selected structures of the green economy (energy consumption, annual carbon dioxide emissions, agricultural sustainability, and circularity of the economy) are lagging behind.

The national economy of the Republic of Azerbaijan has sufficient ecological, human resources and financial opportunities for a gradual transition to a green economy. The main issue is the proper diversification of the economy, determination to implement the work put forward by the state for the "greening" of the economy, as well as the commitments made by international agreements, and the implementation of proper accountability and transparency. Currently, the growing influence of the Republic of Azerbaijan in the world, especially in the so-called "Global South" geographies, may lead to the "export" of Azerbaijan's green economic experiences to those areas in the future. The use of "Azerbaijani experience" in solving the ecological and economic problems of those geographies should further increase Azerbaijan's contribution to the green development of the planet and a sustainable economic model.

#### **REFERENCES:**

- 1. "REPORT" İnformasiya Agentliyi. (2024) Azərbaycanda sahələrin 88 %-i yerüstü mənbələr hesabına suvarılır. Tərtib etdi: Aynur Bayramova. Bakı.
- 2. Aliyev Z.H. (2020). Approaches to Solution Some Problems on the Protection of Erosion Soils in Azerbaijan. Biomedical Journal of Scientific & Technical Research. vol 28. 4, pp. 21845-21859.
- 3. Azerbaijan's agricultural land use: 55% suitable for farming. (2024) Tərtib etdi: Nəzrin Abdul AzerNews qəzeti. 28.08.2024.
- 4. Circular Economy Foundation. (2024) "Circularity Gap Report (CGR) 2024". https://www.circularity-gap.world/2024.
- 5. Crippa, M.; Guizzardi, D.; Pagani, F.; Banja, M.; Muntean and others. (2024). "GHG emissions of all world countries 2024". Publications Office of the European Union, Luxemburg.
  - 6. Dual Citizen. (2024) Global Green Economy Index (GGEI) Afggregate.
- 7. Ember. Yearly Electricity Data. Full data file. https://ember-energy.org/data/yearly-electricity-data/
  - 8. European Parliament. (2023) Circular economy: definition, importance and benefits
  - 9. Food and Agriculture Organization of UN. (2024) Water Report Azerbaijan.
  - 10. Food Systems Dashboard. (2024) Azerbaijan Countdown Indicators Breakdown
  - 11. OECD. (2024) Green Growth Indicators.

https://www.oecd.org/en/data/indicators.html

- 12. Sheydai T., Yatsiuk O. (2024). Sustainable Development of Agriculture in Azerbaijan and Ukraine in the Age of Digitalization. PAHTEI-Procedings of Azerbaijan High Technical Educational Institutions 148(02-02):420-429.
- 13. SOLability. (2024) Global Sustainable Competitiveness Index (GSCI) / URL: https://solability.com/the-global-sustainable-competitiveness-index
- 14. Tunn, V. S. C.; Bocken, N. M. P.; van den Hende, E. A.; Schoormans, J. P. L. (2019). "Business models for sustainable consumption in the circular economy: An expert study". Journal of Cleaner Production. 212: 324–333.

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# "YAŞIL İQTİSADİ DİNAMİKA İNDEKSİ" VƏ ONUN ÜMUMİ İQTİSADİYYATDA TƏTBİQİ

#### XÜLASƏ

**Tədqiqatın məqsədi -** yaşıl iqtisadiyyatın ölçülməsi və ölkə üzrə yaşıl iqtisadiyyata keçidin nə qədər dinamik həyata keçirilməsini araşdırılması üçün sadə ideksləşmə həyata keçirməkdən ibarətdir.

Tədqiqatın metodologiyasına ölkənin enerji infrastrukturunda bərpaolunan enerjinin payı, hökümət tərəfindən yerli və xarici ekoloji proqramların tətbiqi səviyyəsi, ölkənin illik karbon-dioksid tullantısının miqdarı, kənd təsərrüfatında dayanıqlılığın səviyyəsi və iqtisadiyyatın dairəviliyi üzrə 5 metodun qarşılıqlı sintezi ilə indeksləşmə daxildir.

**Tədqiqatın tətbiqi əhəmiyyətinə** bundan əvvəl digər iqtisadi çevrələr və institutlar tərəfindən təklif edilmiş daha mürəkkəb indeksləşmənin daha sadə və əlçatan informasiya resursları ilə qiymətləndirilməsi daxildir.

**Tədqiqatın nəticələrinə** ilk öncə Azərbaycanın qonşu ölkələrlə nisbətdə yaşıl iqtisadiyyata keçidinin qiymətləndirilməsi və boşluqların aradan qaldırılması üçün təkliflər daxildir.

**Tədqiqatın orijinallığı və elmi yeniliyi** - bu sahə üzrə mövcud indekslərə nisbətən daha yeni və sadə yanaşmanın tətbiqi, həmçinin indeksin tərtib edilməsi üçün lazımi informasiyaların əlçatan olmasıdır.

**Açar sözlər**: yaşıl iqtisadiyyat, dayanıqlı iqtisadiyyat, yaşıl iqtisadiyyatın indeksləşməsi, yaşıl inkişaf, dairəvi iqtisadiyyat, yaşıl inkişaf.

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## «ИНДЕКС ЗЕЛЕНОЙ ЭКОНОМИЧЕСКОЙ ДИНАМИКИ» И ЕГО применение в общей экономике

#### **РЕЗЮМЕ**

Целью исследования является проведение простой индексации для измерения зеленой экономики и изучение того, насколько динамично осуществляется переход к зеленой экономике в стране.

Методология исследования включает индексацию путем взаимного синтеза 5 методов: доли возобновляемой энергии в энергетической инфраструктуре страны, уровня реализации внутренних и внешних экологических программ правительством, объема годовых выбросов углекислого газа в стране, уровня устойчивости в сельском хозяйстве и цикличности экономики.

Практическая значимость исследования заключается в оценке более сложной индексации, ранее предложенной другими экономическими кругами и институтами с более простыми и доступными информационными ресурсами.

Результаты исследования включают в себя, прежде всего, оценку перехода Азербайджана к зеленой экономике по сравнению с соседними странами и предложения по устранению пробелов.

Оригинальность и научная новизна исследования заключается в применении более нового и простого подхода по сравнению с существующими индексами в этой области, а также в наличии необходимой информации для составления индекса.

Ключевые слова: зеленая экономика, устойчивая экономика, индексирование зеленой экономики, зеленое развитие, круговая экономика, зеленый рост.

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