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**INSTITUTIONAL ANALYSIS OF SUSTAINABLE ECONOMIC DEVELOPMENT**

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## **ІНСТИТУЦІОНАЛЬНИЙ АНАЛІЗ СТАЛОГО РОЗВИТКУ ЕКОНОМІКИ**

*The article examines the main principles of sustainable development, in particular, in the economic sphere. The methodology of the report on sustainable development from the United Nations is defined as the basis for assessing sustainable development. Based on the analysis of reports on sustainable development, the leading countries in achieving sustainable development have been identified. The dynamics of indicators of the achievement of the seventeen goals of sustainable development for 2017 to 2022 in the specified countries are presented. Four goals were identified that determine the level of sustainable development in the economy, namely: 8 "Decent work and economic growth", 9 "Industry, innovation and structure", 12 "Responsible consumption and production" and 17 "Partnership for sustainable development" and defined indicators of the countries' achievements regarding the sustainable development of the economy. The essence of these indicators has been characterized*

*and the main leading countries in terms of accelerating the achievement of these goals have been identified. Norway's experience in providing institutional support for the achievement of Goal 17 as a leading country in achieving this goal is highlighted. A rating of the first ten countries based on indicators of achieving the economic goals of sustainable development in 2022 has been created. Successful cases of institutional support for sustainable development in leading countries have been identified in accordance with the conducted research on the goals of sustainable development. The main priorities of institutional support are such directions as the state's innovative policy to support the development of Industry 4.0, 5.0, ensuring the harmonization of legislation on sustainable development, supporting global competitiveness, ensuring climate neutrality, supporting the development of energy innovations and decarbonization of the economy, supporting the digitization of production. It was determined that in order to effectively ensure institutional support for sustainable development in Ukraine, implement the stages of monitoring modern programs of institutional support of countries with different structures of economic development, identify common features and identify unique characteristics and measures, compare world programs with Ukrainian ones and determine implementation opportunities, generalize the best global practices of sustainable development, to adapt world practices in Ukraine, taking into account the existing potential and projected results of achieving the goals of sustainable development in the economic sphere.*

*У статті досліджено основні засади сталого розвитку, зокрема, в економічній сфері. Базою для оцінювання сталого розвитку визначено методологію звіту про сталий розвиток від ООН. На основі аналізу звітів про сталий розвиток визначено країни-лідери щодо досягнення сталого розвитку. Представлено динаміку показників оцінки досягнення сімнадцяти цілей сталого розвитку за 2017 по 2022 роки у визначених країнах. Ідентифіковано чотири цілі, що визначають рівень сталого розвитку в економіці, а саме: 8 «Гідна праця та економічне зростання», 9 «Промисловість, інновації та структура», 12 «Відповідальне споживання та виробництво» та 17 «Партнерство заради сталого розвитку» та визначено показники досягнення країн щодо сталого*

розвитку економіки. Охарактеризовано сутність даних показників та визначено основні країни-лідери щодо прискорення досягнення даних цілей. Виокремлено досвід Норвегії у забезпеченні інституціональної підтримки досягнення Цілі 17 як країни-лідера у досягненні даної цілі. Сформовано рейтинг десяти перших країн за показниками досягнення економічних цілей сталого розвитку 2022 року. Визначено успішні кейси щодо інституційного забезпечення підтримки сталого розвитку у провідних країн відповідно до проведеного дослідження цілей сталого розвитку. Встановлено основними пріоритетами інституційного забезпечення такі напрями як інноваційна політика держави щодо підтримки розвитку Індустрії 4.0, 5.0, забезпечення гармонізації законодавства з питань сталого розвитку, підтримка глобальної конкурентоспроможності, забезпечення кліматичної нейтральності, підтримка розвитку енергетичних інновацій та декарбонізації економіки, підтримка цифровізації виробництва. Визначено, що для ефективного забезпечення інституціональної підтримки сталого розвитку в Україні впроваджувати етапи моніторингу сучасних програм інституціонального забезпечення країн з різною структурою промислового розвитку, визначення спільних ознак та ідентифікації унікальних характеристик та заходів, співставляти світові програми з українськими та визначати можливості реалізації, узагальнювати кращі світові практики сталого розвитку, адаптувати світові практики в Україні з врахуванням існуючого потенціалу та прогнозованих результатів досягнення цілей сталого розвитку в сфері економіки.

**Keywords:** *sustainable development, institutional support, innovation policy, Industry 5.0, digitalization.*

**Ключові слова:** *сталий розвиток, інституціональне забезпечення, інноваційна політика, Індустрія 5.0., цифровізація.*

**Problem statement.** Today, in the conditions of a full-scale military invasion of the Russian Federation in Ukraine, European countries are developing concepts of

sustainable development of economics that would be the key to the creation of a new geopolitical picture of the world. The war in Ukraine hastened the need to identify and implement updated current strategies, because the previous ones, according to preliminary assessments by experts, are no longer effective. Institutional analysis will make it possible to identify the needs of society at present, to find out the relevant vectors of sustainable development for future, taking into account the assumption of assistance in the post-war reconstruction of Ukraine in the long-term perspective. The New Industrial Strategy of the European Union (EU) [1] describes three key aspects for future development, which are also the European Green Deal, including support of the global competitiveness of European industries, definition and observance of equal conditions at the national and global levels; achievement of climate neutrality in Europe by 2050 and ensuring Europe's digital future.

### **Analysis of publications.**

Various stages of institutional analysis of geopolitical situation and sustainable economic development have been studied by many scientists, in particular F. Biermann [2], A. Pedersen [3], F. Pasimeni [4], E. Papargyropoulou [5], A. Llanos [6], M. Zampieri [7], Y. Hlushchenko [8], O. Trofymenko [9], and others. However, it should be noted that there are only few works that consider the institutional analysis and strategies for the future sustainable development.

Moreover, many scientific articles written by various economists, political scientists, sociologists and other social scientists that discuss institutional analysis for sustainable economic development. Analysing these scientific articles, it can be defined an institutional analysis as a methodological approach that involves examining the different institutions, operating within a particular social or economic system, identifying the underlying incentives that influence their behavior, and assessing the impact of institutional arrangements on economic outcomes [5: 10]. It involves analyzing the formal and informal rules, norms, structures, and practices that emerge

over time and shape human interaction [10]. Institutional analysis is widely used in various fields such as development studies, public policy, and international relations. Many scholars emphasize the importance of institutional analysis for understanding complex social phenomena and designing effective policies that promote social welfare and economic growth. For example, F. Pasimeni noted in his article 'An Institutional Analysis of the Europe 2020 Strategy' that institutional variables are the most significant ones and have the strongest estimated effects on the sustainable development [4]. The goal of institutional analysis is to identify the factors that drive institutional change and to understand the impact of such changes on economic and social outcomes.[7]

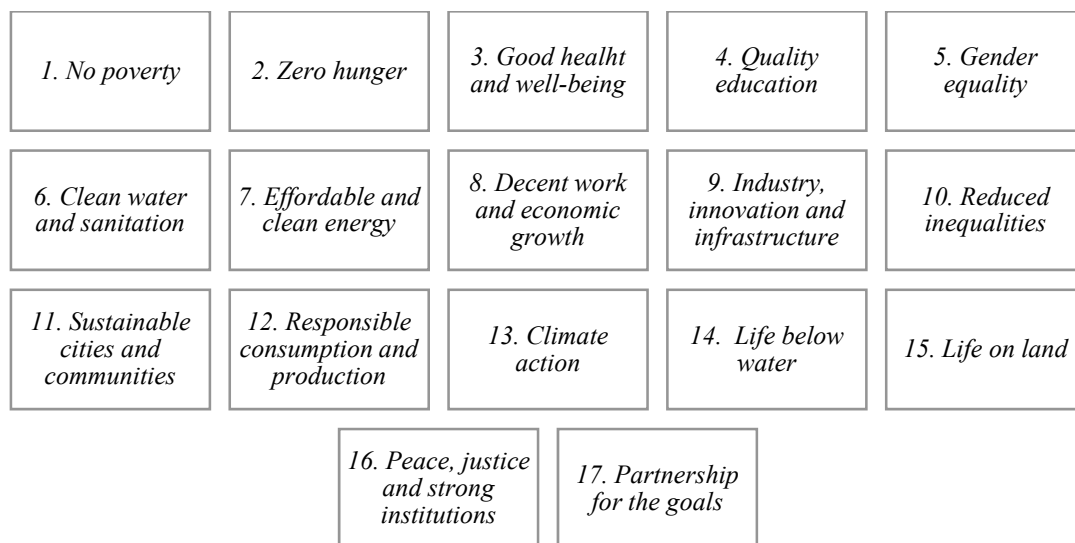
**Purpose of the article.** The aim of the research is justification and definition of directions for institutional support of sustainable development of the economy.

**The main material research.** In today's world, economically developed countries are increasingly striving to achieve sustainable development goals at every stage of their development to ensure and preserve a decent future for their descendants. In general, the concept of sustainable development is a tool aimed at establishing a balance between the needs of modern society in the social, economic and environmental spheres, as well as protecting the interests of future generations. The six main aspects of sustainable development (economic, social, political and legal, international, environmental, and informational) indicate that this concept is a comprehensive paradigm for the future development of humanity [11].

In turn, the "Sustainable Development Goals" or Global Goals, i.e. the key areas of development of the world's countries within the framework of sustainable development, were adopted in September 2015 at the UN meeting, along with the approval and signing by 193 UN member states of the official document of the General Assembly "Transforming our world: The 2030 Agenda for Sustainable Development", which aims to ensure the transformation of states and their economies in a given direction which is

an important institutional factor in ensuring sustainable development in the world countries. However, each country in the world is unique, so this program provides for the introduction of goals taking into account the national processes of ensuring the fulfilment of the tasks set for the government and society [12].

The Global Sustainable Development Goals of each country in the world contain 17 general goals and 169 targets within these goals (Figure 1). It should be noted that these goals are mainly focused on developing countries, as they are the ones who, in their development process, must first of all eliminate such goals as overcoming poverty and hunger, providing sanitation and clean water, affordable and clean energy, peace and justice, good health and well-being.



**Fig. 1 Global Sustainable Development Goals according to the UN program until 2030 [13]**

Every year, the UN Secretary-General presents an annual report on the achievements of the SDG - The Sustainable Development Report (SDG & Dashboards index), which is developed in cooperation with the UN system and is based on a system of global indicators (more than 100) and data obtained by national statistical systems

and information collected at the regional level. The countries in the report are ranked by their overall score. The overall score measures overall progress towards achieving all 17 Sustainable Development Goals. At the same time, the score can be interpreted as a percentage of SDG achievement, where 100 points means that all goals have been achieved. The overall outcome of the 2022 Sustainable Development Report is to ensure peace, diplomacy and international cooperation as fundamental indicators for advancing the 2030 Agenda for Sustainable Development. This conclusion was largely influenced by the Russian-Ukrainian and other military conflicts in the world that cause humanitarian tragedies, as well as the pandemic. In addition, experts have concluded that the world has not been making progress in terms of sustainable development for the second year in a row, although before the pandemic in 2015-2019, the rate of progress of the SDGs was 0.5 points per year, which leads to a decrease in the potential for sustainable development around the world. The leaders among 193 countries in terms of sustainable development, according to the UN Report, are Finland with a total score of 86.51 out of 100, Denmark with a score of 85.62, and Sweden, which was rated at 85.19 points out of 100 [14].

To visualize and analysed the Sustainable Development Goals in the context of five years, the top 10 countries with the highest SDG index (overall index of achievement of the Sustainable Development Goals) as of 2022 were selected. The countries ranked in descending order are Finland, Denmark, Sweden, Norway, Austria, Germany, France, Switzerland, Ireland, and Estonia.

Based on the data from the Sustainable Development Reports for 2017-2022 published by the UN, we have researched and analysed the assessment of sustainable development indicators for the above-mentioned world leading countries (Table 1). It can be argued that the "Nordic countries" such as Norway, Sweden, Finland and Denmark have been in the lead for 5 years and have been demonstrating confident steps towards achieving the sustainable development goals.



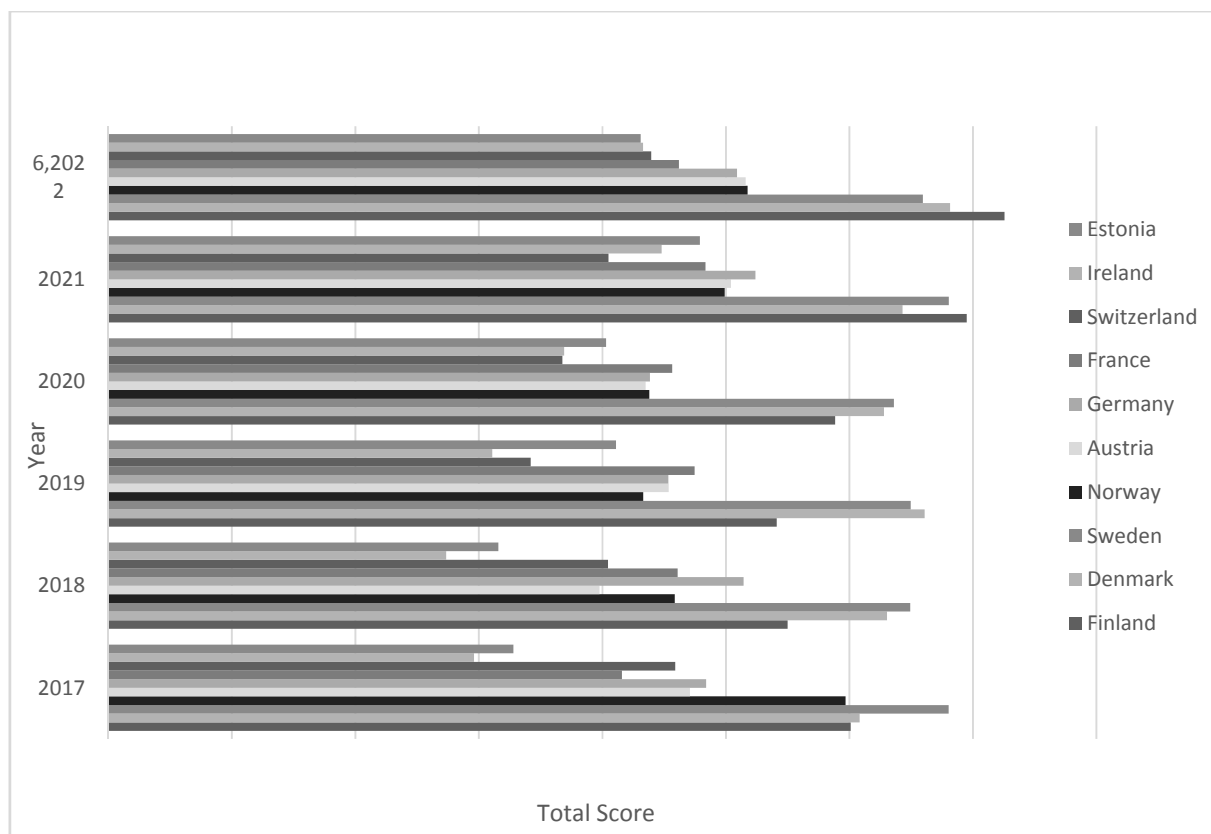
**Table 1. The result of the overall indicators for assessing the achievement of the 17 Sustainable Development Goals for 2017-2022 in selected countries**

<b>Country/Year</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Finland	84.02	83.00	82.82	83.77	85.90	86.51
Denmark	84.16	84.61	85.22	84.56	84.86	85.63
Sweden	85.61	84.98	84.99	84.72	85.61	85.19
Norway	83.94	81.17	80.66	80.76	81.98	82.35
Austria	81.42	79.95	81.07	80.70	82.08	82.32
Germany	81.68	82.28	81.07	80.77	82.48	82.18
France	80.32	81.22	81.49	81.13	81.67	81.24
Switzerland	81.18	80.09	78.84	79.35	80.10	80.79
Ireland	77.92	77.47	78.22	79.38	80.96	80.66
Estonia	78.56	78.32	80.22	80.06	81.58	80.62

*Based on [14]*

According to Fig. 2, the distribution of overall country scores for the period 2017-2022 was evenly distributed in terms of the implementation of targeted sustainable development measures. A sharp decline in the countries' overall scores occurred in 2020 due to the pandemic, which caused a stagnation in global sustainable development and a focus on overcoming the disease, supporting mainly the medical sector.

It should also be noted that all the countries leading the Global Sustainable Development Index belong to the European region, so it can be concluded that the European Union states are able to comply with the UN Development Plan within the given framework due to cultural, historical, political, economic, natural and environmental factors.



**Fig. 2. Dynamics of the integral indicator of sustainable development in selected countries for 2017-2022**

*Based on [11;14]*

In the context of globalization and increasing global challenges in terms of economic uncertainty under the influence of various global and national criteria, more and more attention is being paid to macroeconomic stability and development, as well as international partnership within the framework of the above-mentioned UN 2030 Agenda. That is why it is reasonable to consider the four main Global Goals responsible for economic growth in the context of developed countries.

The first economic goal is Goal 8, "Decent Work and Economic Growth," which, according to the UN program, is to "Overcoming poverty in all its forms and everywhere," namely to stimulate sustainable and inclusive economic growth, full and

productive employment and decent working conditions through GDP growth, increased bank accounts, labour rights, reduced workplace fatalities, increased employment, etc. An important prerequisite is to stimulate entrepreneurship and job creation, as well as effective measures to eradicate forced labour, slavery and human trafficking. According to these targets, the goal is to achieve full and productive employment and decent work for all women and men by 2030. According to the UN, in 2022, Goal 8 was fully achieved by countries such as Cuba and Slovenia, while other countries failed to achieve it entirely by all indicators.

The second important economic goal is Goal 9, "Industry, Innovation and Infrastructure," which states "Build resilient infrastructure, promote inclusive and sustainable industrialization and innovation." The economic growth and development of both the world and a single country depends entirely on investments in infrastructure and innovation, as well as technological progress to find optimal solutions to the challenges faced by society. According to 2022, only Japan and Singapore, as the world's leading innovators and technology leaders, fully achieved their innovation and technology goals, while most countries either failed to fully achieve the goals or partially achieved them, such as the United States, the EU, and China.

The next significant goal of economic growth is Goal 12, Responsible Consumption and Production, which provides the transition to sustainable consumption and production models, namely, reducing the environmental impact through changes in the production and consumption of goods and resources, effective management of natural resources, disposal of toxic waste, reduction of food and other types of waste, etc. Among the countries of the world that are moving in the right direction to achieve the above goal in 2022 are African countries (Congo, Angola, South Africa, Kenya, Nigeria, etc.), Asian countries (India, Pakistan, Vietnam, Afghanistan, Kyrgyzstan, Uzbekistan, Tajikistan, the Philippines, etc.), the islands of Haiti, Guatemala, Honduras and other underdeveloped countries. In other words, this 2022 target is characterized by

opportunities that are predominantly present in the Third World or developing countries, and is hardly achievable in highly developed countries due to high energy consumption, increased waste and lack of waste utilization.

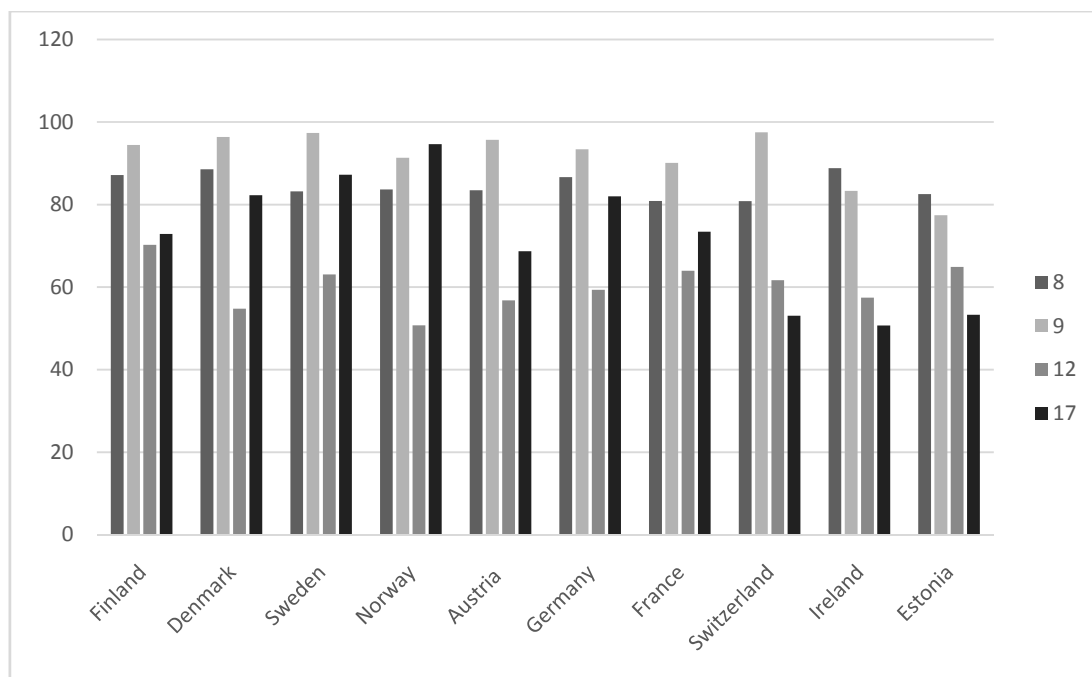
The last economic goal of the Sustainable Development Goals is Goal 17, Partnership for Sustainable Development, which aims to promote peaceful and inclusive societies for sustainable development, ensure access to justice for all and build effective, accountable and inclusive institutions at all levels, while being committed to global partnership and cooperation. The main goal is to unite society with a single purpose - to leave a better future for our descendants and to protect the planet and society. Only one country has achieved this goal as of June 2022, and that is Norway. Due to the growth of public spending on healthcare and education, development assistance, the statistical efficiency index, focus on human rights, and various types of interaction with European and Euro-Atlantic structures, Norway has become one of the most involved in solving global problems of humanity and the most developed countries in the world, unlike other less developed countries [12; 13].

Norway is not a member of the European Union (EU), it is a member of the European Economic Area (EEA, which also includes Iceland and Liechtenstein). Norway has an access to the EU market of goods, services, and capital and the Norwegian government continues to redevelop its foreign investment legislation for getting closer to EU standards and reduce the number of bureaucratic regulations over the last decade to make investment easier. Norway had foreign direct investment of USD 160 billion at the end of 2021 and only increased over the last decade. There are nearly 8,100 companies with foreign owners in Norway, and over 700 companies from the USA are present in the country, employing more than 58,000 people [15].

In addition, for the purpose of a more detailed analysis of sustainable development indicators in the context of the above economic goals, the top 10 countries of the world were analysed according to the SGD Index 2022, as shown in Fig. 3,

according to which the highest development indicator of Goal 8 "Decent Work and Economic Growth" is inherent in Iran - 88.81 points out of 100, and the lowest - in Sweden with 80.62 points. At the same time, Switzerland with a score of 97.5 points ranks first in the development of Goal 9 "Industry, Innovation and Infrastructure" among the listed countries, while Estonia is the last tenth with a total score of 77.42. Switzerland is also among the TOP-5 countries according to the global innovation index – this is an assessment of the country's innovation potential, which determines the place of countries in terms of innovative development in the world. This is explained by the broad and effective institutional support for innovative development in Switzerland. Note that Long-term sustained promotion of education, research and innovation (ERI) is the basis of institutional support in Switzerland. According to the Swiss federal policy system, responsibility for various financial tasks in the ERI sector is shared between the Confederation and the cantons. Based on the various parliamentary decisions, the Confederation plans to spend around CHF 28.1 billion on ERI funding in the period 2021-2024 [16].

Finland was the most active in the development of Goal 12 "Responsible Consumption and Production" in 2022 and received 70.24 points out of 100, while Norway did the worst with a score of 50.7. According to the analysis, Norway confidently took a leading position in the implementation of Goal 17 "Partnership for Sustainable Development" with a score of 94.62 points, while Ireland took the last place with a total score of 50.71 [12; 13].



**Fig. 3. General indicators of achieving the economic goals of sustainable development in 2022 in selected countries - leaders of sustainable development**

*Based on [14]*

To summarize, sustainable development is one of the key criteria for the future development of society in each country and the world as a whole. The Global Sustainable Development Goals for 2030, developed by the UN in 2015, aimed at ensuring economic growth, environmental and social stability, are being implemented by each country in different ways, and significant factors, such as war or pandemic, have made adjustments to the implementation of the plan. However, analysing the Sustainable Development Report for 2017-2022, it can be noted that the top three countries remain unchanged (Finland, Denmark, Sweden) and continue their path to a better life. It is also necessary to distinguish such countries as Ireland, Norway, Germany in connection with the success in achieving SDG 8, Switzerland, Sweden and Denmark in achieving SDG 9, to study the measures of Finland to achieve SDG 12 and Norway to achieve SDG 17 in 2022. In addition, the indicators of the economic goals of

sustainable development (Goals 8, 9, 12 and 17) demonstrate the achievement and implementation by countries of macroeconomic, international and innovation policy instruments aimed at minimizing the negative impact of humanity in the context of the future.

Institutional support for sustainable development is widely implemented in these leading countries for the studied sustainable development goals, which leads to high results. So, for example, in Finland, renewable energy sources meet about 40% of the final energy consumption, which is an indicator of the achievement of both goal 12, and goal 8, and goal 7 "Clean Energy", and is especially important in the conditions of limited energy resources and geopolitical transformations with full-scale military invasion of the Russian Federation in Ukraine. In Finland, the National Energy and Climate Strategy 2030 is presented, which aims to increase the use of renewable energy so that its share in final energy consumption increases to more than 50% during the 2020s. Denmark, Germany, Austria, France are good examples of the use of such institutional mechanisms for financial stimulation of renewable and alternative energy as "green" tariffs and surcharges, which are based on pricing tools. The mechanism boils down to the fact that the government fixes the price, and the amount of electricity is already determined by the market. The green tariff is often set for a long period and then gradually reduced, as well as differentiated for different technologies and installed plant capacities. This makes it possible to increase the energy efficiency of industrial enterprises and the economy as a whole and ensure the implementation of the principles of sustainable development.

**Conclusions.** The study analyzed the achievement of sustainable development goals by leading countries. The main priorities of institutional support for sustainable development in different countries were determined, and the countries under study were rated according to the main goals of sustainable development in the economic sphere. In developed countries, to ensure sustainable development, strategies are implemented to

ensure Industry 4.0 and 5.0, the key elements of most planning documents in these areas are energy transition, innovation, decarbonization, circular economy, digitization of production. The institutional support should contain such directions as the state's innovative policy to support the development of Industry 4.0, 5.0, ensuring the harmonization of legislation on sustainable development, supporting global competitiveness, ensuring climate neutrality, supporting the development of energy innovations and decarbonization of the economy, supporting the digitization of production. It is important at the state level to ensure the following stages for ensuring effectively the institutional support for sustainable development in the world and in Ukraine: 1) monitoring of modern programs and initiatives of countries with different structures of industrial development 2) determination of common features and identification of unique characteristics and measures ; 3) comparing world programs with Ukrainian ones and determining the possibility of implementation; 4) generalization of the best global practices and their implementation; 5) adaptation of world practices in Ukraine, taking into account the existing potential and projected results of achieving goals. This institutional support forms the basis for the perspective of further research in the field of sustainable development.

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