

## The “Green” Campus of The University as a Driver of Sustainable Development

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The article highlights the problematic issues and prospects for methodology and practice transformation in ensuring the implementation of sustainable development principles in an environmental crisis. Google Trends has demonstrated the rapid promotion of the terms green campus and green university over the past five years (January 1, 2018 – January 1, 2022). A critical analysis of research results on changing the priorities of positioning themselves in the market by global financial business leaders with an emphasis on environmental and social orientation, which directly necessitates the implementation of environmental policy and increase social responsibility of domestic universities. The necessity to consider in the mechanism of practical implementation of the principles of sustainable development the fact that today the efficiency of the economy is largely determined by the impact of environmental risks. It is concluded that the principles of the green economy and the principles of sustainable development in general are known to society, but not fully implemented in practice, in particular the methods of doing business in Ukraine, which do not always correspond to them. According to surveys, 65% of respondents say that environmental risks largely define whether they will be able to keep their jobs in the near future. It is substantiated that today it is necessary to form practical skills of adherence to the principles and principles of sustainable development in the process of teaching and educating the younger generation, which determines the leading role of universities in the context of global trends in environmental challenges. Thus, for universities, the creation of green campuses is a tool for implementing environmental policy, and consequently a confirmation of their authority in the educational space and high-ranking positions in national and world rankings. The necessity of improving the mechanism of financing the development of green university campuses is substantiated; introduction of an effective system of relations between universities, which are guided by ESG policy in their activities, with local authorities in order to cooperate in the implementation of green projects to ensure sustainable development of the territory.

*Keywords:* sustainable development, green economy, green university, green campus, ESG, social responsibility, investment, COVID-19 pandemic.

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**Introduction.** Following the results of the UN Environmental Summit (Glasgow, November 2021), which was attended by 30,000 businessmen and activists, as well as leaders of 120 countries, the Glasgow Climate Pact was signed. Coal use reduction, ongoing environmental activities monitoring and financial assistance increasing in combating climate change to poor and developing countries are the main provisions of the Glasgow Climate Pact (November 13,

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2021), signed by almost 200 countries. The main tasks are to curb global warming by reducing global carbon emissions. Among the ways to achieve the set tasks are the following the reduction of methane emissions and further complete abandonment of its use, stopping the process of deforestation (by 2030), the abandonment of the coal use, the transition to environmentally friendly cars that provide minimal and zero emissions into the environment (until 2040); the goal is to reduce greenhouse gas emissions completely in the long run until 2050 [11].

The implementation of its principles in practice is important for ensuring the sustainable development of Ukraine. Purely theoretically, the green economy principles and sustainable development principles in general are known to society, but, unfortunately, are not fully implemented in practice, in particular the methods of doing business in Ukraine, which do not always correspond to them. According to surveys, 65% of respondents say that environmental risks largely determine whether they will be able to keep their jobs for the next five years [9].

Understanding the directions and ideas and principles implementation of tools and sustainable development should be formed already during training by means of practical examples and direct participation of students in such projects. In the context of this, the creation of green campuses is currently a priority issue in the implementation of environmental policy of universities, local authorities and the state as a whole.

The possibility of solving the above problem lies in the plane of further improvement of the mechanism of sustainable development principles implementation with the participation of universities, whose activities combine both scientific (theoretical) component and applied (practical).

**Analysis of recent research and publications.** To date, foreign and domestic scientists have developed a significant methodological basis for the green economy in the context of sustainable development. Theoretical and methodological principles are reflected in numerous studies of such outstanding foreign scholars as A. Markandi, A. Cameron, E. Barbier, K. Stewart, D. Pears [1, 2, 3]. Among Ukrainian scientists who have made a significant contribution to the development of methodology and methodological and practical approaches to the development of the principles of green economy should be noted L.G. Melnyk, O. Veklych, B. Danylyshyn, Y. Berezhna, T. Galushkina [4, 5, 6].

At the same time, it can be stated that the mechanisms of practical implementation of the principles of sustainable development, in particular in the field of education and business, need to be improved, especially in terms of their detail and specification.

**The aim of the article.** Today, unfortunately, the development of a specific mechanism and tools for the of sustainable development implementation principles in the practice of various economic entities, given the impact of the COVID-19 pandemic on the economy and society as a whole, has not received enough attention in scientific research and publications of domestic economists.

Accordingly, the aim of the article is to analyze and summarize foreign experience in the creation and operation of green university campuses as drivers of sustainable development, in particular in the context of the COVID-19 pandemic; study of the terms of green campus and green university, the definition of their organizational structure and the range of environmental

measures they implement, as well as justification of the leading role of universities in ensuring the implementation of sustainable development in long-term economic and social perspectives.

**Research methods.** The theoretical and methodological basis of the study is based on a systematic approach in combination with a comparative method and analysis of statistical data. Considering the interest of scientists in the topic of our study, took advantage of Google Trends; this research tool allows you to compare the frequency of search queries for research keywords.

**Research results.** The COVID-19 pandemic has significantly intensified compliance with the priorities of the green economy, both at the global and national levels, and at the level of large corporations global business leaders, as well as in the international educational environment. This fact is also clearly evidenced by the fact that the environmental summit in Glasgow (2021) was the first since the conclusion of the Paris Agreement in 2015.

To confirm the rapid popularization of the terms of green campus and green university for the period from 01.01.2018 till 01.01.2022 we use Google Trends tools all over the world (Fig. 1).

It should be noted that a similar search query in Ukraine did not yield any results due to lack of information. This really confirms the insufficient development of this area in our country and the need to spread the practice of implementing the principles of green economy through universities that implement environmental and energy saving policies.

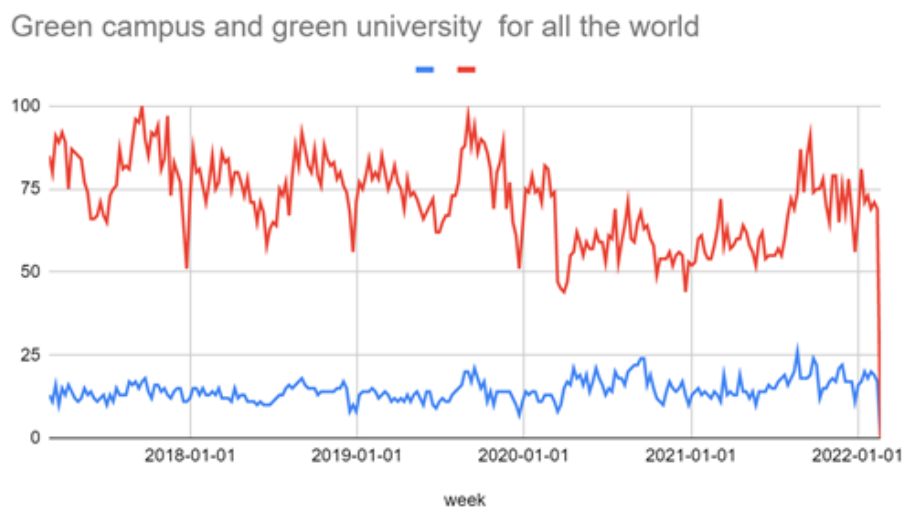


Fig. 1. Search results for the terms green campus and green university around the world for the period from 01.01.2018 till 01.01.2022 (built with [7])

The pace of dynamics of search queries demonstrates a steady interest in these concepts. However, we must mention that the number of requests for the term green university far exceeds the requests for the green campus.

Note that a campus (corporate or university) is usually a territory owned by a corporation or university that has partial or complete autonomy, which houses certain social facilities and the necessary infrastructure. Yes, an example of a university campus is a campus (usually a

university grounds). According to world practice, student dormitories, libraries, auditoriums, laboratories, assembly halls, canteens or other infrastructure facilities are located on the campus.

In conclusion, it is seen that universities can be the leading and effective actors in the implementation of environmental policy of the state and its sustainable development.

In general, the green campus of the university is a partially or fully autonomous part of the higher education institution, which conducts activities aimed at protecting the environment, namely: separately collects waste, reduces carbon emissions, saves water and electricity, develops environmental infrastructure, implements educational programs in order to develop skills and patterns of behavior that ensures the practical implementation of the principles of sustainable development in business and everyday life. In the green campus of the university students have the opportunity to participate in the development and implementation of environmental projects (practical area), as well as to conduct research on topical environmental issues (theoretical area). In general, the functioning of the green campus of the university involves a variety of activities that meet the principles of sustainable development. It should also be noted that the activities of green campuses have a socially oriented responsibility, and this function is undoubtedly entrusted to universities, which determines their significance and importance for the development of society.

It is impossible to note, about uniformity of dynamics of search inquiries on the specified concepts, in particular in the beginning of 2022 interest is growing rapidly.

In terms of countries, the results of search queries are presented in Fig. 2. As it can be seen from the color of the picture, the attention of most of the world is focused on the term green university. For example, in Italy, Germany and India, the ratio of inquiries is 50% / 50%, in Singapore, Spain, the Netherlands and Ireland the shift of interest towards the green university — an average of 30% / 70%. In countries such as the United Kingdom, the United States, Canada and Australia, there is almost 100% interest in green universities — 10% / 90% (Fig. 2).



Fig. 2. The level of interest in the concepts of green campus and green university by country [7]

The results of the annual KPMG (International Network of Independent Firms Providing Auditing, Tax and Consulting Services) survey show that large corporations, global business leaders, build their strategies on the principles of ESG (Environmental, Social, and Corporate

Governance), which are a set of characteristics of the company's management, which ensure the involvement of this company in solving environmental, social and managerial problems [8, 9]. Note that the results of many studies show that the world's major business leaders are already implementing the principles of environmental friendliness in their management system, that is, in other words, the sector of corporate green campuses is actively developing. On average, 30% of companies invest 10% of their income in sustainable development [10] (Fig. 3). It is because society has clearly conclude that there is a direct link between negative climate change and the efficient functioning of economies. Thus, environmental risks as factors of external influence cannot be considered in the strategies and forecasts development of corporate development.

In the context of the outlined range of issues, we cannot ignore the impact of the COVID-19 pandemic on the hierarchy of priorities of companies that currently actively demonstrate their contribution to environmental and social development. In other words, the implementation of environmental policy is a characteristic of the credibility of companies, their position in the market. For universities, the creation of green campuses is a tool for environmental policy implementation, and accordingly a confirmation of their authority in the educational space and high ranking positions in national and world rankings.

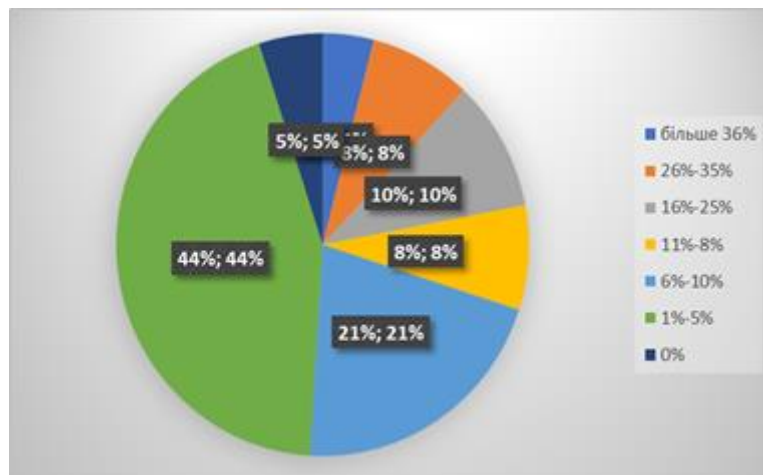


Fig. 3. The share of companies that plan to invest a certain percentage in sustainable development (built on data [8, 9])

Note that the principles of environmental friendliness and sociality are closely linked. In our opinion, adherence to the principles of sustainable development, in particular environmental friendliness, is a direct social responsibility. Following this logic, we believe that universities should be the key players in the ESG principles. because they are entrusted with the educational and upbringing functions of the younger generation. The development of environmental policy by universities and their subsequent operation, which will be based on the principles of the ESG, automatically directs the educational process to develop students' skills in the future to build their professional activities based on the principles of sustainable development. This approach, in turn, will minimize or neutralize the impact of environmental risks on the economy. Thus, the introduction and development of green university campuses is the key to sustainable development of countries and the world.

**Conclusions and prospects for further research.** We believe that the current mechanism of sustainable development principles implementation in business and everyday life is imperfect in Ukraine. It can be explained by the lack of a systematic understanding of the specific mechanisms for the implementation principles of green economy. Such practical skills should be developed during training both through theoretical knowledge and applied activities related to the development and environmental projects / startups implementation within the of green university campuses functioning.

Given the relevance of the issues identified in this article, further research will be related to the development of a specific mechanism for financing the development of green university campuses; introduction of an effective system of relations between universities, which are guided by ESG policy in their activities, with local authorities to cooperate in the implementation of green projects to ensure sustainable development of the territory.

Thus, green universities can play a leading role in the process of sustainable development of the state, in particular in solving problems of climate change and decarbonization of the economy, which requires close cooperation between universities and the state, separate local authorities. Green campuses are one of the tools of the mechanism of the economy greening, as they combine scientific and applied components, which allows you to create the necessary laboratories and startups.

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У статті висвітлюються проблемні питання та перспективи трансформації методології і практики у забезпеченні реалізації принципів сталого розвитку в умовах екологічної кризи. За допомогою використання інструментів Google Trends продемонстрована стрімка популяризації термінів «зелений кампус» та «зелений університет» протягом останніх п'яти років (01.01.2018 - 01.01.2022рр). Здійснено критичний аналіз результатів досліджень щодо зміни пріоритетів позиціонування себе на ринку світовими фінансовими бізнес-лідерами з акцентом на екологічну і соціальну спрямованість, що безпосередньо зумовлює необхідність реалізації екологічної політики та підвищення соціальної відповідальності вітчизняних університетів. Доведено необхідність врахування в механізмі практичної реалізації принципів сталого розвитку того факту, що на

сьогодні ефективність функціонування економіки значною мірою визначається впливом екологічних ризиків. Зроблено висновок, що засади «зеленої економіки» та принципи сталого розвитку в цілому відомі суспільству, але не повністю впроваджуються в практику, зокрема це стосується методів ведення бізнесу в Україні, які не завжди їм відповідають. За результатами опитувань 65% респондентів стверджує, що екологічні ризики значною мірою визначають, чи зможуть зберегти працюючі свої робочі місця у найближчій перспективі. Обґрунтовано, що на сьогодні є необхідним формування практичних навичок дотримання засад та принципів сталого розвитку в процесі навчання та виховання молодого покоління, що визначає провідну роль університетів в контексті світових тенденцій боротьби з екологічними викликами. А отже, для університетів безпосередньо створення «зелених» кампусів є інструментом реалізації екологічної політики, а відповідно підтвердженням їх авторитетності в освітньому просторі та високих рейтингових позицій в державних та світових рейтингах. Обґрунтовано необхідність удосконалення механізму фінансування розвитку «зелених» кампусів університетів; запровадження ефективної системи взаємовідносин університетів, які керуються політикою ESG у своїй діяльності, з органами місцевої влади з метою співпраці в реалізації «зелених» проєктів з метою забезпечення сталого розвитку території.

*Keywords:* сталий розвиток, «зелена» економіка, «зелений» університет, «зелений» кампус, ESG, соціальна відповідальність, інвестиції, пандемія COVID-19.