GREEN ECONOMY AND SDG 12: WAYS TO REDUCE CARBON FOOTPRINT WITH THE HELP OF MODERN TECHNOLOGIES

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Introduction

The main challenge that unites the spheres of economy and ecology is the abundance of needs and the limited availability of resources. Sustainable consumption and production, as well as the involvement of "green" technologies in various sectors of the economy, are proposed as solutions to this issue. Moreover, achieving Goal 12 of the United Nations Sustainable Development Goals "Sustainable consumption and production patterns" requires not only resource optimization, but also creating a fundamentally new, low-carbon model of production in the context of today's global climate change [1]. In addition, achieving carbon neutrality in industrial enterprises is a new condition for economic competitiveness.

It is significant to mention that today, the widespread implementation of digital innovations in diverse sectors allows for real-time monitoring and analysis of the process, which, in turn, creates convenience for entities and also helps reduce losses. The annual dissipation of one-third of global food production serves as a primary driver of unnecessary carbon emissions and inefficient land utilization. Digital monitoring and supply chain technologies can reduce carbon footprint by up to 10% by reducing food loss [1]. Scientific findings suggest that artificial intelligence has the potential to reduce global emissions by 4% [2]. Furthermore, AI management has a positive impact on 70% of SDG 12 indicators, especially in resource optimization and differentiated waste categorization [3].

The Republic of Uzbekistan has set a priority task of reducing greenhouse gas emissions per unit of gross domestic product by 10 percent from 2010 levels by 2030 [4,5]. The introduction of "smart" meters in the country has reduced electricity losses by 15%, which indirectly serves to reduce the carbon footprint [6]. Digitalization of production technologies and deployment of sustainable technologies will help reduce carbon emissions, as well as simplify and systematize the process [7]. The excess costs of the organisations can be minimised as a result of a reduced carbon footprint [8]. Moreover, it is planned to attract investments by effectively using existing opportunities in Uzbekistan to reduce greenhouse gas emissions and ensuring access to the international carbon credit market [9], and enterprises and organizations can also receive additional income by modernizing sustainable production methods.

Conclusion

In general, through the mainstreaming of low-carbon economic structures and emerging technological infrastructures, it is possible to significantly contribute to a sustainable lifestyle and the green future, reducing carbon emissions and ultimately achieving a positive result on SDG 12. As previously indicated, the involvement of "green" technologies is a guarantee of not only environmental, but also economic growth. Therefore, measures to reduce the carbon

footprint not only improve the environmental situation, but also increase the profitability of enterprises by optimizing operating costs and creating new sources of income (carbon markets). In the conditions of Uzbekistan, the integration of digital technologies with a “green” strategy allows for the decoupling of economic growth from resource consumption. In the future, the competitiveness of enterprises will depend on the extent to which they adopt low-carbon and resource-efficient technologies.

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