

State Organization «Institute of Market and Economic&Ecological Researches of the National Academy of Sciences of Ukraine»

**Summary of scientific novelty for the research
«Economic and Environmental Priorities of the Green Economy in the Context of Ukraine's Sustainable Development»**

(Registration No.0118U006524, performance period: 01.09.2018 - 31.12.2019)

The work was carried out at the request of the Ministry of Ecology and Natural Resources of Ukraine (letter No. 5/3-8/10564-18 dated 04.10.2018), the Department of Ecology and Natural Resources of the Odesa Regional State Administration (letter No. 6706/06-21/4386 dated 03.10.2018), and the Department of Agrarian Policy of the Odesa Regional State Administration (letter No. 02/955 dated 09.10.2018).

The scientific novelty of the most significant research results is as follows:

Within scientific&methodological aspects:

- The theoretical provisions and institutional foundations for forming an innovative paradigm for implementing the methodology of the "green economy" in domestic economic practices have been substantiated. This paradigm envisages a phased transition from an environmentally-oriented innovation-investment policy within a "circular economy" system to a comprehensive model of an "inclusive economy."

- The theoretical rationale for forming the specification of "green economy" management mechanisms has been developed and expanded. Unlike existing approaches, it is based on: Defining economic and environmental priorities for "green growth" in Ukraine's economy; Analyzing global experiences in developing action plans for the "green economy" of leading countries; Systematizing existing documents of the UN and other international organizations.

- A methodological approach to monitoring "green growth" indicators based on sustainable development has been developed and substantiated. This approach combines conceptual and methodological foundations and is based on a set of monitoring principles (systematicity, comprehensiveness, adequacy, flexibility, objectivity, accuracy, effectiveness, goal orientation, priority of state economic interests, scientific integrity). It uses an expanded system of base indicators, integrating European and new author-specific economic-environmental metrics for a comprehensive assessment of Ukraine's progress toward achieving the Sustainable Development Goals (SDGs). These results form a scientific basis for identifying "green growth" priorities and market-oriented implementation mechanisms.

- The methodological provisions for monitoring the Sustainable Development Goals have been improved by integrating the national system of economic-

environmental indicators with author-specific groups of metrics, including: Goal 2: Indicators of organic production and fertilizer use by agricultural enterprises. Goal 6: Water supply and wastewater management metrics. Goal 7: Energy supply and consumption indicators. Goal 8: Foreign economic activity metrics. Goal 9: Indicators of eco-friendly production, waste processing, and information technology implementation. Goal 11: Inter-municipal partnership indicators. Goal 12: Waste utilization metrics. Goal 15: Biodiversity restoration funding for protected areas.

- This has allowed for identifying current trends and challenges in Ukraine's "green growth" and substantiating strategic directions for sustainable transformation.

- A methodological approach to assessing the impact of economic metrics on key "green growth" indicators (as an alternative to decoupling analysis) has been developed. It is based on a logical-structural analysis of the factors influencing components of resource and ecological productivity of GDP. The expanded research procedure includes assessing the levels and dynamics of influencing factors and metrics of GDP productivity, diagnosing parameters of economic security, and examining the impact of agriculture and raw material exports on the natural environment.

- Mechanisms for implementing the SDG "Sustainable Cities and Communities" have been developed. They consider the modern needs of Ukraine's regional economic systems for "green growth" under decentralization. A toolkit has been proposed, including: Local taxes and fees; Strategies for sustainable development of grassroots territorial economic systems; Financial security funds for real investments created from surplus temporarily free budget resources; Platforms for financial and informational support of community projects in priority areas, such as effective waste management, housing accessibility, quality improvement, sustainable regional cooperation, and joint program implementation.

- Institutional support for the development of small and medium-sized ecological enterprises (SMEEs) has been improved in the context of "green growth." Unlike existing approaches, it is based on proposals for introducing "green" tax incentives, preferential loans for ecological investments, and management systems for "green" supply chains and procurements.

- Institutional and organizational-economic mechanisms for stakeholder interaction in creating eco-friendly land arrays under the "green growth" policy have been enhanced, incorporating: A conceptual framework for institutional support of inclusive "green agriculture"; A system of targeted goals and mechanisms for developing eco-friendly territories; Conditions and requirements for institutions supporting "green agriculture"; Role distribution among regional authorities and local communities, with recommendations for greening land use practices in Ukraine.

- The theoretical rationale for prioritizing the transformation and modernization of management systems for eco-friendly production in the agri-food sector has been

refined. This approach emphasizes implementing innovative tools such as ecological engineering, re-engineering, franchising, and benchmarking as integral components of the "green economy" concept.

- Mechanisms for environmental activity management in the national transport sector have been improved. Unlike existing approaches, these are based on: Identifying threats and risks in providing sustainable transport services; Determining priorities and types of eco-friendly urban transport; Developing principles and frameworks for responsibility at the state level.

- The theoretical foundations for forming ecosystem services, ecological banking mechanisms, and methodological support for "green growth" in Ukraine's protected areas have been developed. These are based on an author-developed system of metrics and indicators that align with sustainable development and manage protected area activities while balancing social, economic, and environmental stakeholder interests.

- Institutional priorities for implementing property relations regarding natural resources in the context of the "green economy" have been refined. Unlike existing approaches, this involves improving legal frameworks for specific directions and segments of natural resource utilization.

Within scientific&practical aspects:

- Practical recommendations for developing a national framework for managing the "green economy" have been provided. These include determinants of "green growth" in Ukraine's economy, such as circular economy principles, energy consumption reduction, sustainable urban planning, clean air and water provision, protected area development, alternative energy promotion, and creating eco-friendly rural communities.

- It has been demonstrated that the priorities of the "green economy" transformation policy based on sustainable development are: Green industries and eco-friendly technologies; Smart infrastructure development; Ecological tax reform; Comprehensive evaluation of natural capital and ecosystem services; A favorable regulatory environment; Resource-saving consumption.

- It has been proven that implementing this policy will result in increased productivity and competitiveness through reduced energy consumption and waste generation, fostering technological development and innovation, creating new economic sectors, markets, and jobs, increasing incomes through balanced ecological and resource productivity, and reducing environmental risks.

- It has been established that the formation of an innovation-investment policy for "green growth" should be based on the combination of innovations from the fifth and sixth technological paradigms characteristic of the post-industrial economy with scientific-technological "green modernization" financed by investments from the third and fourth paradigms typical of the industrial stage.

- It has been proven that the key element in forming the economic-environmental priorities of the "green economy" is monitoring the achievement of the Sustainable Development Goals (SDGs). This monitoring measures the progress of "green growth" and ensures the process of "green transformation" of the economy. Based on the proposed methodological recommendations for functional diagnostics of SDG achievement, monitoring was conducted for the period 2005–2017. The study included qualitative assessments of trends and changes in economic-environmental indicators compared to baseline indicators and 2020 target values. Cause-effect relationships were identified between the analyzed indicators, revealing the mutual impact of economic indicators on "green growth" metrics. The study also identified "bottlenecks" and proposed strategies to address them. Recommendations were provided for achieving SDGs, including:

SDG 2: "Zero Hunger" (agriculture development).

SDG 6: "Clean Water and Sanitation."

SDG 7: "Affordable and Clean Energy."

SDG 9: "Industry, Innovation, and Infrastructure."

SDG 11: "Sustainable Cities and Communities."

SDG 12: "Responsible Production and Consumption."

SDG 15: "Life on Land" (ecosystem restoration).

- It has been demonstrated that the institutional framework for the "green economy" must integrate the prerequisites for implementing eco-friendly production into the priorities of Ukraine's national ecological policy. These should align with specific Sustainable Development Goals for 2030 and harmonize Ukrainian regulations with European standards. The study found that modernizing the system for managing eco-friendly production in the food processing sector requires incorporating ecological engineering, crowdsourcing, re-engineering, franchising, and benchmarking.

- Methodological recommendations for assessing the impact of economic indicators on the main metrics of "green growth" in Ukraine have been developed. These recommendations are based on the convergence of European and national methodological approaches to assessing "green" indicators and include a nine-step evaluation procedure. The distinctive feature of the recommendations is the logical-structural analysis of influencing factors (GDP structural transformations, sectoral production volumes, population size, and ecological investment volumes and structures) on two groups of GDP productivity components: resource productivity (water and energy productivity) and ecological productivity (carbon productivity and waste GDP productivity). This approach enables identifying cause-effect relationships between economic and "green" indicators, measuring the progress of "green growth" in the country, and identifying tools for its promotion.

- Institutional support for implementing the "green economy" model in Ukraine

has been proposed. This support considers European experience in waste management under Directive 2010/30/EU, Directive 2010/31/EU, and Regulation 2007/715/EU. A progressive development action plan for the waste management sector, particularly its transport and logistics component, has been outlined. It includes organizational and economic measures for joint planning and coordination of transport logistics processes, reducing transport intensity, and minimizing waste generation.

- Methodological recommendations have been developed to align the socio-economic and environmental interests of stakeholders in Ukraine's protected areas (PAs). These include practical recommendations for establishing a payment system for ecosystem services as part of the "green growth" methodology, in accordance with EU Directive 92/43, and proposals for implementing a "banking" mechanism in Ukraine's realities.

- Methodological recommendations and an indicator system for developing urban transport and infrastructure plans have been proposed, along with suggestions for introducing innovative measures in the city of Odesa.

- Proposals have been made for implementing SDG mechanisms, including: "Sustainable Cities and Communities," which addresses modern needs of Ukraine's regional economic systems for "green growth" under decentralization. "Responsible Production and Consumption in Ukraine," involving stakeholder collaboration in creating eco-friendly land arrays. These proposals are based on defined goals and criteria, allocation of responsibilities among regional authorities and local communities, and recommendations for greening Ukraine's land use practices.

- A program for supporting the development of organic production in Ukraine has been proposed, based on a reproductive approach. This program stimulates targeted reproduction of organic products by aligning the economic interests of businesses and the state, emphasizing the growth of domestic demand. It is based on principles of sustainable development, inclusivity, selectivity, systematization, interconnectedness, and flexible government support measures.

Scientific Supervisor of the research:

Doctor of Economics, Professor,
Chief Researcher of the Department of
Economic and Environmental Problems of
Seaside Regions

Natalya ANDRYEYeva

