

MECHANISMS FOR ENSURING ESTONIA'S PERMANENT DEVELOPMENT: THE ENVIRONMENTAL ASPECT

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Abstract. The latest trends in global development actualize the problem of ecological modernization in order to ensure the sustainability of socio-economic and political functioning of modern states, creating additional opportunities for an appropriate response to possible threats. The issues of ecological modernization are key on the agenda of the EU, which seeks to demonstrate leadership in addressing it. Ecological modernization and the subsequent digitalization of the economic sphere are considered one of the most important components of sustainable development of the EU and each member state. These processes and mechanisms for their practical implementation are approved in the program The European Green Deal. The European Commission created the Recovery and Resilience Facility, which provides for the coordination of efforts of EU member states to ensure resilience and sustainability of development. *The subject of the study* is the content and characteristics of sustainable development in Estonia. *The purpose of the scientific exploration* is to identify environmental aspects and to specify mechanisms for sustainable development in Estonia. *Research methodology:* systematic approach, methods of analysis and generalization. Estonia has developed a long-term strategy "Estonia 2035", which defines the basic principles of sustainability and sustainable development of the state. The tools for implementing the set sustainable development goals are legislative, managerial, educational and awareness-raising. In this strategy, the priorities of sustainable development of the state are innovation and sustainability of the economy, its competitiveness in world markets, energy efficiency, digitalization of management processes, safe environment for citizens, stimulating their activity in different spheres of society. Environmental issues are a key aspect of the "Estonia 2035" strategy, which meets such sustainable development goals as rational consumption, sustainable cities and communities, combating climate change, and preserving the ecosystem. A recovery and sustainability plan, correlated with the "Estonia 2035" strategy, was presented to enhance the ability to implement the basic principles of sustainable development and obtain additional sources of funding. Estonian officials are actively engaging financial and political mechanisms to implement sustainable development. According to the plan approved by the European Commission, Estonia will receive 969.3 million euros in funding from the Recovery and Resilience Facility. They will be distributed along the following lines: ecological modernization, digitalization, economic and social sustainability. In addition, political mechanisms, in particular public diplomacy, are actively used. They are aimed at positioning environmental initiatives according to the state branding strategy and intensifying cooperation with stakeholders in the implementation of international environmental projects. *Research results:* sustainability and resilience of Estonia's development correlate with the need to implement environmental modernization of the economy and digitalization of management processes; implementation of the "Estonia 2035" strategy, national recovery and sustainability plan is facilitated by economic and political decision-making mechanisms at the supranational and national levels of government.

Key words: digitalization, energy efficiency, ecological modernization, green economy, public diplomacy, stakeholders, sustainable development.

JEL Classification: Q54, Q57, Q58

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1. Introduction

The global challenges of our time and their foreseeable consequences actualize the formation of the environmental agenda, a key aspect of which is the ecological modernization of the world economy. The basic principles of the green economy are low-carbon, resource-efficient, socially inclusive (UNEP, 2022). The progressive transition to a green economy will improve resource consumption efficiency, decarbonize, create a safe living environment, and expand opportunities for sustainable development of the global community (United Nation, 2015). In this context, there is a growing interest among global policy actors in the formation of sustainable development strategies, a key aspect of which is the issue of ecological modernization.

The main goal of the scientific exploration is to determine the environmental aspects and to specify the mechanisms of sustainable development in Estonia. The National Sustainable Development Strategy Resilient Estonia 21 was agreed upon by the government and enacted by the parliament back in 2005 (Ministry of the Environment, 2005). With this document, Estonia confirmed its intentions to implement the UN Sustainable Development Goals by 2030, updating the public on key ideas such as security of living space, quality of life, environmental friendliness and balanced economic development.

The state is a member of the EU, so the key pillars of sustainable development correlate with the relevant initiatives of European institutions. In particular, it is about the program The European Green Deal, aimed at reducing carbon emissions by 55% by 2030 and achieving climate neutrality by 2050. The implementation of the key principles of this program and the need to find additional sources of investment actualizes for Estonia the issues of intensifying the process of ecological modernization of the national economy, increasing the level of energy efficiency in order to ensure sustainability and sustainability of national development in the current political reality.

The comprehensiveness of the study consists in defining the environmental aspects and specifying the mechanisms of achieving sustainable development in Estonia. Systematic approach in the research will allow to specify essentially substantive characteristics of sustainable development of Estonia, its ecological aspects and to define their correlation with the corresponding initiatives of the EU. The method of analysis will contribute to the clarification of the essence of sustainable development, directions and mechanisms of its implementation. The use of the method of generalization will contribute to the formation of intermediate and final conclusions about the mechanisms of sustainable development in Estonia.

2. The environmental component of Estonia's sustainable development

Sustainable development is seen by the Estonian ruling elite as the basis for ensuring the state's subjectivity in domestic and foreign policy. Given today's challenges and threats to national security, much attention in the political discourse is paid to the issues of low-carbon development of the national economy, the formation of a safe space for citizens, the search for investment in the development of renewable energy sources and increasing the efficiency of resource consumption (Riigikogu, 2020). The general principles of the state's sustainable development are defined in the long-term strategy "Estonia 2035", which is considered by officials as an instrument of strategic management and budget planning. It was developed by the government on the initiative of various stakeholders (non-governmental organizations, politicians, experts, citizens) and enacted by the parliament.

This strategy views the state's sustainable development through the prism of the following priorities: 1) development of human capital and the full involvement of public initiative; 2) innovation and sustainability of economic development; 3) a safe environment for citizens; and 4) effective public administration (Estonian Government). The step-by-step implementation of these priorities will be carried out in the context of the EU-approved agenda (2019–2024), relying on the mechanisms of financial support for Estonia's sustainable development.

One of the most important parts of the EU's agenda is combating climate change and the ecological modernization of the national economies of its member states. Consequently, environmental topics are key in the "Estonia 2035" strategy, which correlates with the following Sustainable Development Goals – responsible consumption, sustainable cities and communities, combating climate change, and preserving the ecosystem. First, it is about activation of state institutions and stakeholders in the implementation of ecological modernization of the national economy. Among the priorities are the efficient consumption of national resources, modernization of transport infrastructure, development of alternative energy sources, primarily offshore wind energy. Emphasis is placed on attracting innovation and research potential to develop and implement green technologies aimed at adapting to global challenges and gradually achieving carbon neutrality.

Second, improving the functioning of the national ecosystem is seen by the ruling elite as the basis for the formation of a safe space of life of society and sustainable development of the state as a whole.

The question is about the introduction of new approaches in the formation of a sustainable and safe space of self-actualization of citizens. It should be characterized by a balance of the following indicators: safety of living, opportunities for physical activity, accessibility of goods and services. An important role in ensuring the efficiency of its functioning is assigned to the formation of a waste management system and the renewal of the public transport fleet in order to minimize the negative impact on the environment.

At the same time, the global pandemic and the need to respond adequately to its consequences have brought to the fore the search for additional opportunities to ensure the sustainability of economic and political development. The European Commission created the Recovery and Resilience Facility, which provides for the coordination of EU and national governments' efforts to ensure sustainability and resilience. In this context, Estonian officials presented a recovery and sustainability plan correlated with the "Estonia 2035" strategy and agreed at the level of the European Commission. The Estonian plan focuses on several key aspects of sustainability that require financial support from the EU institutions.

First, the ecological modernization of leading industries and transport infrastructure, ensuring energy efficiency and rational consumption of resources in order to gradually reduce the effects of the negative impact of climate change on the ecosystem of the state as a whole, the preservation of its biodiversity. Second, the promotion of an environmentally friendly space and appropriate infrastructure for citizens to live in, which meets their key needs in the context of adaptation to climate change. Finally, investing in the development of an environmental monitoring system to optimize management and control of the environment, predicting possible environmental crisis situations and responding to them in a timely manner to minimize the impact on the national economy.

Among the tools for implementing Estonia's sustainable development goals, officials emphasize:

- 1) legislative, aimed at improving the national legislative framework for environmental protection, achieving carbon neutrality, the introduction of key principles of the "green economy";
- 2) managerial, aimed at optimizing the communication of power institutions at the national and regional levels for the implementation of environmental modernization, taking into account national interests, the specifics of regional development and the needs of citizens;
- 3) educational, awareness-raising, aimed at creating an environmental culture of citizens, increasing the involvement of public initiative (Estonia, 2021).

Therefore, the main ideas and principles of Estonia's sustainable development are documented in the long-term national development strategy, as well as in the recovery and sustainability plan. In these documents, the state acknowledges its responsibility to combat climate change and its consequences for the ecosystem and the livelihoods of citizens. At the same time, the implementation of Estonia's comprehensive environmental modernization is an integral part of the implementation of relevant EU environmental initiatives.

3. Sustainable development mechanisms in Estonia

A key aspect of Estonia's sustainable development is the combination of economic and political influence mechanisms implemented by the government with the active support of EU institutions. In this context, the European Commission created the Recovery and Resilience Facility (RRF, 2020). It accumulates 723.8 billion euros, of which 385.8 billion euros are loans, and the remaining 338 are grants. These funds will be used to support member states' economic development and environmental modernization. The amounts of payments for the implementation of national recovery plans depend on the concrete results of the implemented reforms. At the same time, member states have the opportunity to raise funds from other sources to expand funding for areas that are a priority for them. The reallocation of financial resources is based on submitted national recovery plans, which should include roughly 37% of spending on the green economy and 20% on the digitalization of the economy and governance.

The Estonian National Plan is focused on green and digital transition, economic and social sustainability. Its implementation will increase Estonia's economic development and GDP growth from 0.89% to 1.3% by 2026, create 4,000 additional jobs, and expand opportunities for structural reforms in the economy (European Commission, 2021). Several of the most promising goals presented in Estonia's national plan can be distinguished (see Table 1).

According to representatives of the European Commission, the Estonian national plan provides for 42% of the funds to be used for climate goals and 22% for digitalization. Consequently, a positive decision was made on the funding presented in the initiative plan for Recovery and Resilience Facility resources in the amount of 969.3 million euros. In order to intensify the implementation of the plan, Estonia was granted 126 million euros immediately after the approval of the decision by the European Commission (Press corner EC, 2021). Also, Estonia

Table 1

The main goals of financing the Estonian national plan

| Direction | Main goals | Planned financing, million euros |
|-------------------------------|--|----------------------------------|
| Environmental modernization | Supporting businesses in making the green transition and introducing green technologies | 220 |
| | Introduction of renewable energy sources and energy efficiency | 92 |
| | Greening public transport in Tallinn and building a terminal as part of the Rail Baltica project | 96 |
| Digitalization | Digitalization of public services | 97 |
| | Supporting digitalization of small and medium-sized businesses | 83 |
| | Formation of high-capacity networks in rural areas | 24 |
| Economic and social stability | Improving access to health care, digitalization of medical management processes | 326 |
| | Stimulating the development of the labor market, creating conditions for a combination of training and work for young people and re-training opportunities | 10 |
| | Improving the competitiveness of Estonian business, involving its representatives in regional and global projects | 33 |

Source: Factsheet (2021)

is forming a national GreenFund investment fund of 100 million euros, which aims to ensure long-term investments in environmental modernization, development and production of green technology.

Political mechanisms of sustainable development are also used quite actively in Estonia, in particular, it is a question of public diplomacy. First, the main idea of the state branding strategy is environmental friendliness and innovativeness in the formation of a space of opportunities for self-actualization of citizens. In this context, the Green Tiger platform was established to coordinate the efforts of public and private stakeholders in creating the prerequisites and further development of the green economy in Estonia. The state is positioning itself as a responsible actor for implementing the 2030 Agenda for Sustainable Development. In particular, the national report (Economic and Social Council, 2020) was presented at the Sustainable Development Policy Forum. It emphasizes the positive dynamics of environmental modernization of the economy, increasing the use of energy from renewable sources, and confirms Estonia's continued participation in the implementation of the Sustainable Development Goals in domestic and foreign policy.

Second, Estonian government members actively participate in special PR events aimed at popularizing among the public the ideas of sustainable development and increasing the level of environmental responsibility and culture of citizens. In particular, with the assistance of the World Energy Council, the Estonian Ministry of Economic Affairs and Communications held the World Energy Leaders' Summit (World Energy Leaders' Summit, 2021). During the meeting they discussed the problems of digitalization of the energy sphere, ways of implementation of ecological modernization of the world energy, peculiarities of development of regional energy systems and sources of financing the energy transition.

Third, Estonia is actively involved in international projects aimed at coordinating the efforts of partner states to implement environmental sustainability initiatives at the level of certain regions. The Executive Agency for Innovation and Networks has initiated a grant of 719.7 million euros for the implementation of The Baltic Synchronisation Project. It is aimed at synchronizing the power grids of the Baltic states with continental Europe, so it involves cooperation between Estonia, Latvia, Lithuania and Poland. The Harmony Link across the Baltic Sea between Poland and Lithuania, built as part of the project, will be the basis for the formation of a renewable energy system (Innovation and Networks Executive Agency, 2020). They will ensure the energy sustainability of the entire region and enhance the ability of participating states to implement The European Green Deal.

Estonia, together with Poland, Lithuania, Latvia, and indirectly Finland, is involved in the Rail Baltica project, which aims to further integrate the Baltic states into the European rail network (Rail Baltica, 2014). It involves the construction of electrified railway infrastructure. The project will take into account the following environmental aspects:

- 1) the use of environmental technologies and materials;
- 2) development of a route outside the Natura 2000 protected area;
- 3) installation of noise barriers;
- 4) digitalization of the traffic control system.

The funding comes from grant funds in the amount of 824 million euros allocated in the Connecting Europe Facility. Estonia itself will receive 235 million euros for implementation of its commitments.

The project provides for the construction of new multimodal passenger terminals designed to connect urban, intercity and regional connections with commercial and recreational areas. This will expand opportunities in the formation of so-called smart zones of comfort and safety of citizens, which are

one of the main components of sustainable development. The built infrastructure will also make it possible to integrate the management system of different types of transport connections, which will help boost trade and accelerate the transportation of goods in the Baltic states to the EU.

4. Conclusions

The main principles of the state's sustainable development are defined in the long-term strategy "Estonia 2035". Among the main priorities of the strategy, officials emphasize environmentally friendly and innovative economic development, safety in all spheres of life, and involvement of citizens' initiatives. It is synchronized with The European Green Deal and

other EU environmental initiatives in implementation of these priorities.

In order to attract additional sources of financing, the Estonian National Recovery and Sustainability Plan was presented, which focuses on the implementation of the green and digital transition, ensuring economic and social sustainability. Estonia aims to combine economic and political devices to implement the main qualities of sustainable development. Economic ones are connected with the attraction of financial support from the EU and the functioning of the national investment fund, and political ones are connected with participation in the formation of the environmental agenda, intensification of cooperation with stakeholders and implementation of the state branding strategy.

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Received on: 15th of July, 2022

Accepted on: 28th of August, 2022

Published on: 30th of September, 2022