

ABSTRACT

of the dissertation submitted for the degree of Doctor of Philosophy (PhD) in the educational program «8D02209 – Oriental Studies»

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on the topic: Japanese Model of the Sustainable Development: Fundamental Plan «Junkangata shyakai» («A sound material-cycle society»)

General description of the research. This dissertation explores Japan's experience in implementing the concept of sustainable development, with particular focus on the Fundamental Plan «Junkangata Shyakai» («A Sound Material-Cycle Society») based on waste management principles. The study analyzes the main directions of Japan's comprehensive sustainability policy, including legislative frameworks and support mechanisms. It also examines the specific roles and participation of key stakeholders such as the national government, local authorities, private enterprises, non-governmental (NGOs) and non-profit organizations (NPOs), research institutions, and local citizens in advancing this strategy.

The research highlights Japan's achievements through the integration of social, economic, and environmental dimensions and assesses the potential for adapting its successful practices to the context of Kazakhstan.

Relevance of the research. Today, the intensification of social, economic, and environmental crises has made sustainable development a key global priority. Increasing social inequality, economic instability, environmental degradation, resource depletion, and climate change have become common challenges for countries around the world. In response, the Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, represent a major step toward addressing these issues through integrated and long-term solutions.

Effective waste management is a key component of sustainable development, as it directly contributes to environmental protection, the conservation of natural resources, and the safeguarding of public health. International agreements and standards in this area, such as the Stockholm Declaration (1972), the Basel Convention (1989), and various UN programs, have shaped national regulatory systems in many countries, including Japan. These frameworks have played an important role in forming the global structure of waste management, encompassing social, economic, environmental, and institutional dimensions.

In Japan, sustainable development and effective waste management hold strategic importance at the national level. The country's limited territory, high population density, and scarce natural resources have made waste management an integral part of government policy. In addition, historically rooted cultural values, such as respect for nature, environmental responsibility, and a culture of frugality, form the social foundation for the efficient use of resources.

In this context, the experience of Japan's Fundamental Plan «Junkangata Shyakai» (2003-2024, 5 fundamental plans) is particularly noteworthy. The plan aims to promote resource efficiency, develop effective recycling practices, and implement environmental responsibility. Japan's sustainability policy is distinguished by not only

comprehensive government measures and legal regulations but also the active involvement of businesses, NGOs, NPOs, and citizens.

The Government of Japan views waste management as one of the key priorities of its national sustainable development strategy. For instance, Prime Minister Fumio Kishida (2021-2024) emphasized the importance of resource recycling and strengthening local-level material circulation during the 213th session of the Japanese Parliament. Furthermore, at the 2021 UN Climate Change Conference (COP26), he referred to the period leading up to 2030 as a «critical decade» in the fight against climate change and highlighted the need for comprehensive action.

Kazakhstan is facing social, economic, and environmental challenges as a result of rapid industrial development and urbanization as well. President Kassym-Jomart Tokayev has identified sustainable development as a national priority and emphasized the need to improve environmental reforms and waste management practices. In this regard, the country aims to integrate sustainability principles into economic planning, improve infrastructure, adopt international standards, and enhance public participation.

Thus, an in-depth and comprehensive study of Japan's approach to sustainable development holds significant practical value for the global academic community.

The purpose of the research is to determine the practical significance of Japan's sustainable development model based on the Fundamental Plan «Junkangata Shyakai» by analyzing its social, economic, environmental, and institutional mechanisms. To achieve this goal, the following **tasks** were set:

- to analyze the theoretical foundations of sustainable development, circular economy, and waste management;
- to trace the evolution of Japan's policy on sustainable development and waste management;
- to examine the background factors behind the creation of the Fundamental Plan «Junkangata Shyakai» and its institutional characteristics;
- to assess the effectiveness of the Fundamental Plan «Junkangata Shyakai» and analyze its social, economic, and environmental impact;
- to conduct a comparative study of waste management practices in Japan and Kazakhstan;
- to develop recommendations for adapting some elements of the Japanese model to Kazakhstan's sustainable development agenda.

The object of the research – Japan's sustainable development policy and its waste management system.

The subject of the research is the social, economic, environmental, and institutional dimensions of applying the principles of resource efficiency, waste management, and circular economy in the context of Fundamental Plan «Junkangata shyakai».

The theoretical framework of the research is based on the concepts of sustainability, development, and their integration within the paradigm of sustainable development.

Within the scope of sustainability, the study draws on key theoretical approaches such as Limits to Growth, which highlights the finite nature of resources; Ecological Economics, which explores the interdependence between the economy and the natural

environment; and the Planetary Boundaries theory, which defines the ecological limits of Earth's systems.

Within the framework of development, the research builds on classical economic theories, modernization theory, dependency theory, new institutional economics, and post-development theory. These perspectives are employed to examine the continuity of development, global inequality, the influence of institutional factors, and alternative development models.

Sustainable development is further examined through three major theoretical approaches: the Three Pillars Model, which emphasizes the balance between social, economic, and environmental dimensions; Intergenerational Justice, which addresses the alignment of interests between present and future generations; and Social Capital Theory, which highlights the role of trust and cooperation within society.

The concept of circular economy plays a significant role in this research. It draws on the theories of Closed-Loop Systems, Cradle to Cradle, and Performance Economy, all of which emphasize resource efficiency, waste prevention, and the reduction of environmental impact.

The study also incorporates Extended Producer Responsibility and Life Cycle Assessment theories in the field of waste management. These approaches focus on controlling the sources of waste generation and minimizing environmental impact throughout the production and consumption stages.

This theoretical foundation provides the basis for analyzing Japan's experience, identifying its structural features, and outlining the conceptual prerequisites for adapting this model to the context of Kazakhstan.

Research methods. The dissertation applies a set of theoretical and empirical methods grounded in the principles of consistency, systematic approach, and objectivity. Theoretical methods include theoretical analysis and synthesis, content analysis, systems analysis, structural-functional analysis, and comparative analysis.

Empirical methods involve expert interviews and SWOT analysis (strengths and weaknesses, opportunities and threats).

Hypothesis of the research. The research is based on the following scientific questions:

1. The Fundamental Plan «Junkangata shyakai» has contributed to the formation of an effective waste management system in Japan and represents a successful integration of the social, economic, environmental, and institutional elements of sustainable development;

2. If appropriate institutional foundations, infrastructure, and public environmental awareness are established, the core principles and aspects of Japan's Junkangata Shyakai model can be adapted to the context of Kazakhstan.

Scientific novelty of the research:

- for the first time, the structure and content of Japan's Fundamental Plan «Junkangata shyakai» have become the subject of comprehensive theoretical analysis, with a focus on its institutional and socio-political role within the country's sustainable development system;

- for the first time in domestic scholarship, the implementation of the plan has been systematically analyzed, with its historical development stages, theoretical foundations, core principles, and implementation dimensions clearly identified;
- based on expert interviews, the research identifies similarities and differences in the legal regulation, institutional structures, and levels of public participation in waste management systems in Japan and Kazakhstan;
- through SWOT analysis, the environmental policies of both countries are comparatively assessed, revealing their strengths, weaknesses, opportunities, and threats;
- based on the research findings, the study proposes directions for adapting Japan's experience to the national context of Kazakhstan.

The practical significance of the research lies in its potential application at the national and regional levels for the development and improvement of sustainable development and waste management policies. The effective social, economic, environmental, and institutional aspects of Japan's Fundamental Plan «Junkangata shyakai» can serve as a reference for relevant government bodies in Kazakhstan.

In addition, the research findings are applicable in higher education for training specialists in oriental studies, ecology, waste management, and sustainable development, as well as in methodological and educational programs aimed at enhancing public environmental awareness.

Main provisions for defense:

1. Sustainable development, circular economy, and waste management are integral components of contemporary environmental policy. The interconnection among these concepts aims to promote efficient use of resources, reduce environmental impact, and advance social equity. Their theoretical analysis provides a foundation for a comprehensive understanding of environmental challenges and formulating effective solutions;

2. The formation of Japan's sustainable development policy and waste management system has been shaped by social, economic, and environmental factors and is grounded in a systematic institutional approach. This system evolved in response to historical experience, ecological crises, and global environmental agendas;

3. The Fundamental Plan «Junkangata Shyakai» emerged during a critical stage of Japan's ecological transformation and represents a systemic framework underpinning the country's sustainable development strategy. It is regarded as an effective tool for achieving strategic goals such as the rational use of natural resources, adaptation to climate change, and the transition to a carbon-neutral economy;

4. The Fundamental Plan «Junkangata Shyakai» has established an effective system of institutional regulation and has achieved significant results across social, economic, and environmental dimensions. Socially, it has raised environmental awareness, strengthened civic responsibility, and encouraged public participation. Economically, the use of waste as a secondary resource has contributed to the development of new markets and job creation. Environmentally, the plan has led to a reduction in waste volumes and greenhouse gas emissions. Its future development potential lies in digitalization, innovation-driven incentives, and adaptation through international experience;

5. Based on expert interviews, key similarities and differences were identified between the waste management systems of Japan and Kazakhstan in terms of legal regulation, institutional frameworks, and public participation. Comparative analysis of these aspects, with consideration of national contexts, enabled the identification of institutional and legal mechanisms potentially adaptable to Kazakhstan's conditions;

6. The SWOT analysis identified the strengths, weaknesses, opportunities, and potential threats in the environmental policies of Japan and Kazakhstan. Based on these findings, targeted recommendations were formulated for adapting selected principles of the Fundamental Plan «Junkangata Shyakai» to the Kazakhstani context. The proposed priorities include legislative reform, infrastructure development, identification of economically viable solutions, and the enhancement of environmental awareness and responsibility.

Approbation of the research. The dissertation was conducted at the Far East Department, Al-Farabi Kazakh National University.

Publications of the PhD candidate include: 1 article published in an international peer-reviewed journal indexed in the Scopus database (Q1, Sustainability, percentile – 88), 4 articles published in national journals recommended by the Quality Assurance Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan, and 3 articles presented at international scientific conferences.

The structure of the dissertation includes normative references, definitions, symbols and abbreviations, an introduction, three chapters, a conclusion, a list of references, and appendices.