



# “Greening” Special Economic Zones: Chinese and Russian Experience

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**Abstract.** Special economic zones are recognized as effective tools to attract investment in national economies. At the same time, special economic zones, representing economic activities across various industrial sectors, are a threat to the environment. The article aimed at comparative analysis of the state policy in the field of “greening” of the special economic zones in Russia and China. The author compares regulation on special economic zones in these two countries, defines shortcomings in the Russian special economic zones’ regulation, and proposes criteria allowing to conduct a “greening test” of the regulation to check its compliance with the environmental law. It is concluded that the legislation on special economic zones in Russia needs to be improved in the field of protecting the environment and minimizing damage to it because of activities carried out within the borders of special economic zones. The author offers the set of measures for Russian special economic zones’ green transformation and improvement.

**Keywords:** Special Economic Zones, Green Policy, Ecologization, Investment, Sustainable Development Goals, Environment Protection.

## 1 Introduction

The 2030 Agenda for Sustainable Development adopted by United Nations defines 17 Sustainable Development Goals (SDG) [1]. Sustainable development requires a range of measures from increasement economic growth to combating climate change and protecting the environment. Therefore, it is obvious, that modern society will not be able to function properly without the symbiosis of industry and ecology. In this regard, states face the task to find the golden mean between industry and ecology, as well as of attracting investment in national economies and the development of environmentally friendly, "green" production.

Special economic zones (hereinafter – SEZ) are geographically delimited areas within which governments facilitate industrial activity through fiscal and regulatory incentives and infrastructure support [2]. These areas are used in more than 120 countries and contribute to investment attraction, modernization of infrastructure, development of production and creation of new jobs. Notably, that not all countries were im-

plemented SEZ successfully and these tools are not equally efficient within these countries. Thus, SEZ did not justify the expectations in Russia or in India, but these countries still strive to make domestic SEZ efficient.

Meanwhile, the environmental impact of SEZ, its compliance with the requirements of the environmental law, and "contribution" to the sustainable development are even more important than their economic efficiency.

More than 5,400 SEZ are successfully functioning in the world today and their number is constantly growing. [2]. For example, more than 120 different types of SEZ functioning in Russia since 2005 [3]. Scholars rightly note that although economic growth contributes significantly to the creation of opportunities for future generations, the long-term future places environmental interests at the center of the political agenda [4]. Researchers also note that the essence of the modern ecological approach is the perception of the economy as a solely goal of development, but as a mean of maintaining the life of present and future generations. Moreover, some authors justify the need to "green" the legislation specifically in the field of investment to ensure the right of humanity to a favorable environment, not depleted and capable of self-repair [5].

In this regard, one of the global trends in the development of SEZ is the "ecologization" or "greening" of its regulation. Following this trend, countries' policies are transforming rapidly from economy to ecology. Today they strive to create a new type of SEZ – the model of a green sustainable SEZ.

Two countries – Russia and China were chosen for the comparative analysis of their state policy in the field of "greening" of SEZ. These countries were chosen because their SEZ are at diametrically opposite levels of development and success. Thus, Chinese SEZ have become the main drivers of national economic development. However, Russian SEZ are significantly far from this result, and their efficiency is questioned. In this regard, it is of particular interest to analyze the policies of these countries regarding the development of green sustainable SEZ: which measures each country has chosen and how this has affected the environment? Is it possible to borrow the successful experience of China to reanimate SEZ in Russia?

At the present time there are many research papers devoted to the analysis of the state "green" SEZ policy in China [6, 7] and several devoted to the SEZ ecologization in Russia [8]. At the same time, we can't find research articles contained the comparative analysis of the SEZ regulation in the sphere of the environmental protection. That is why the aim of the paper is to compare the state policy in the field of "greening" of special economic zones of Russia and China. Methods used in this research paper are comparative analysis of the current legislation and policies on ecologization of SEZ in Russia and China and legal analysis of the legislation and literature on this topic.

## **2 Green Sustainable SEZ: Chinese Story of Success**

Chinese SEZ are famous across the world as a tool made "Chinese Economic Miracle" possible. There are about 552 state-level zones and 1,991 provincial zones, together accounting for over half of all SEZs in the world [2].

Intensive industrial development fostered by SEZ has led to environmental degradation. Experts stated that quarter of the people of China have no access to clean drinking water; air and soil are polluted. These problems have posed a great threat to economic development, human life, and property [7].

To cope with mentioned problems Chinese Government made a several measures to improve the situation. Thus, new policy was designed, and actions were made to stabilize ecology within the country by using SEZ.

The Eco Industrial Park demonstration program (EIP), started in 2003, aimed to promote transformation of conventional industrial zones into a resource-efficient and clean model or construction of new industrial zones based on industrial symbiosis and clean production principles [9]. The Circular Economy Demonstration Industrial Parks (CEDIP), launched in 2005, was based on the same principles as the EIP program, including promotion of Reduce, Reuse and Recycle (3R) and emission reductions [9]. Moreover, the 14th Five Year Plan (2021-2025) pushed for the structural changes needed to facilitate a green transformation and defined the near-term trajectory of China’s development. This encouraged green transformation of SEZ [10].

Analysis of the mentioned documents allowed to detect the next measures made for ecologization or greening of SEZ in China:

- five areas of comprehensive SEZ assessment were defined: economic competitiveness; technology innovation, administrative efficiency; regional development, and what is specifically important, eco-efficiency and environmental protection [11].
- increasement of the state support for Chinese companies in green technologies such as hydrogen and carbon capture: eliminating trade and non-trade barriers to climate-friendly products, instituting green building codes, and establishing renewable energy or energy-efficiency regulation, tax reduction for green high-technology investment, and R&D support [7].
- attraction of the private sector to participate in green initiatives and financing development. It was proved, that lack of private sector participation is not sufficient to address the large needs [6].

And the most amazing fact is that China turned SEZ – one of the reasons of worsening ecology, into the tool, capable to correct its own mistakes. Figures show, that new policy aimed at SEZ green transformation already resulted the average industrial water reuse has increased by 90%; of solid waste – by 94,1%, and the energy consumption decreased by 32.7% [9].

Thus, we can see that new “greening” SEZ policy can be recognized as efficient, and it already made an impact on ecological situation in China.

### **3 Russian Federation: Small Steps on the Way to SEZ “Greening”**

It is noted that the ecology within the Russian Federation is estimated as unfavorable. More than 30 billion tons of production and consumption waste is accumulated because of economic and other activities [12]. That is why scholars noted that the most urgent

tasks for modern regulators are the “greening” or “ecologization” (the term used in Russia) of the legislation, combining ecology with economy [13].

First steps in this direction were provided by the Strategy of ecological safety of the Russian Federation for the period till 2025. It provides following measures on maintenance of ecological safety as: improvement of the legislation in the field of environmental protection, strategic assessment of projects and programs of development of the Russian Federation; drawing up of the list of indicators of the state of ecological safety.

It should be noted that as of today criteria of effectiveness of SEZ from the position of compliance with environmental legislation has not developed. We propose that these criteria can be given within the “greening” test, which makes it possible to assess the compliance of the legislation on SEZ with the norms and principles of environmental law. It can be an important step towards the improvement of legislation on SEZ in accordance with SDGs.

Based on the analysis of the measures aimed at Chinese SEZ green transformation as well as solutions, proposed in the literature, the following criteria of effectiveness of SEZ from the position of compliance with the requirements of environmental legislation are offered:

- the presence in the legislation of requirements for compliance of activities carried out within SEZ with the norms of environmental legislation. It is difficult to overestimate the importance of “inclusion” of such requirements in the legislation. The laws governing SEZs’ creation and functioning are the fundamental legal acts in this area. Implementation of the relevant requirements within these acts will contribute to the fulfillment of these requirements by the business entities and governmental bodies;
- the possibility of participation of representatives of the environmental community (environmental human rights organizations, etc.) in decision-making regarding the creation and functioning of SEZ, guaranteed by the law. The implementation of public control over SEZ would help to minimize the risks of environmental damages. As the authors note, the participation of the environmental community in solving such issues seems to be the most promising approach of organizational and legal enforcement of the legitimate interests of citizens in the field of environmental protection, protection of environmental rights, provided by the current legislation [5]. In addition, the public participation will ensure the preservation of a reasonable balance between the objectively necessary use of natural resources for profit, and constitutional requirements of environmental protection and the protection of fundamental environmental rights [14];
- state support measures for encouraging green technologies production within the SEZ.

Analysis of the legislation on SEZ in terms of proposed criteria has led to the conclusion that Russian SEZ can barely pass the “greening” test.

Thus, first, when planning to create SEZ, the authorities consider the compliance of the potential territory with the established requirements. However, the legislation on SEZ does not contain requirements for the compliance of activities carried out within their boundaries with environmental legislation. Neither laws, containing the conditions

for creating various types of SEZ, nor the regulation, containing the criteria for evaluating the effectiveness of SEZ do not include needed requirements.

For example, the Resolution No. 398 of the Government of the Russian Federation "On Approval of Criteria for Creation of Special Economic Zones" of April 26, 2012 does not contain criteria for environmental safety of activities planned to be carried out within the boundaries of such zones. Besides, criteria that would allow to evaluate the harm to the environment that has been caused by creation of special economic zones. Mentioned criteria are also absent in the Decree of the Government of the Russian Federation No. 643 of July 7, 2016 "On the Procedure for Evaluation of Efficiency of Special Economic Zones".

The criteria established in the aforementioned documents allow only evaluate SEZ economic efficiency. This does not seem correct since these legal acts do not consider the long-term prospects for SEZ development and their contribution to the sustainable development of Russian society.

Even if the amount of residents' investments in the regional economy is quite high, the positive effect of the functioning of such territories may be leveled in the long term if the activities carried out within their boundaries systematically harm the environment.

Turning to the second criterion, we note that the legislation on SEZ does not provide for the participation of representatives of the environmental community in addressing the SEZ management. Thus, the Supervisory Council, that coordinates the activities of the participants of SEZ, does not include representatives of environmental organizations or authorized bodies in the field of environmental protection.

As it follows from it. 3 of art. 7 of the Federal Law "On Special Economic Zones in the Russian Federation", the Supervisory Board of a SEZ shall be created in order to coordinate activities of participants of SEZ, exercise control over implementation of the agreement on creation of the SEZ, assist in implementation of projects of residents and other investors and also to review and approve prospective plans of development of the SEZ and exercise control over implementation of those plans. In this respect, according to it. 5 of art. 7 of this Act, the Supervisory Council comprises representatives of the federal executive power body, representatives of executive and administrative bodies of a municipal entity or representatives of executive and administrative bodies of municipal administrations. Meanwhile, the presence of representatives of environmental organizations in SEZ Supervisory Board will allow more fair evaluation of SEZ from the position of the necessity of the environmental protection.

Speaking of the state support measures for encouraging green technologies production within the SEZ (last criterion of the test), we can say that at the present time the legislation on SEZ in Russia does not contain any specific measures, supporting green technologies. At the same time, implementation of the following measures could potentially improve the SEZ impact on environment. Thus, we propose: a) financial support for green technologies' projects within SEZ (e.g., grants) as it is set in China; b) encouraging public private partnership in the sphere of creation of mentioned technologies; c) encouraging the green procurement with special conditions for residents of SEZ-producers of “green” technologies.

## 4 Conclusion

Worsening of the global ecological situation led to necessity of turning from economic efficiency to environmental safety. It influenced on further SEZ development and determined necessity of their transformation into green sustainable SEZ. That, in its turn, become a challenge for modern states, obliged to reconsider their policy in the sphere of SEZ regulation. Defined anomalies of SEZ in the Russian Federation in addition to the SEZ “greening” test and recommendations for its’ improvement could be used for the creation of the “green” regulation on SEZ across the world. Also, these recommendations could be applied for law-making in the sphere of SEZ in the international and domestic level and for other countries to design the policy for smart SEZ green transformation. Moreover, results achieved in this research paper could be used as a basis for further research in the sphere of the SEZ and environmental law.

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