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To cite this article: E N Abanina *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **808** 012061

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Environmental sustainability in management: existing conditions and guidance for action

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Abstract. In this study, the authors substantiate the need for introducing environmentally sustainable management (as a measure of sustainable development) into the public administration system of a separate state using the example of Russia. For this, the authors analyzed the primary sources that establish the legal framework for sustainable development and sustainable management. The indicators of environmental pollution in dynamics were also studied, the results obtained were critically assessed from the standpoint of determining the causes of the ecological state. Identified internal threats to the formation of environmental sustainability, which generally hinder the achievement of the planned goals of sustainable development. In conclusion, measures are proposed to introduce environmental friendliness into the structure of public administration.

1. Introduction

In December 2018, the United Nations Secretary-General asked the UN to raise the level of its domestic ambitions and intensify efforts to tackle climate change from the inside. The Environment Management Group and UNEP have developed the United Nations Sustainable Management Strategy 2020–2030 with a full vision of sustainable management and the milestones to achieve it. [1] In this way, the United Nations has taken a progressive step by showing by its own example that it stands ready to make a focused and long-term commitment to ensure that its own activities do not cause further environmental harm. It is undeniable that the ecological component of sustainable development requires governments and society in general to develop and implement measures to meet human needs while preserving the planetary life support system (sustainable use of natural and water resources, use of renewable energy sources, conservation of biomass and biodiversity, prevention of harmful industrial and household emissions) [2].

The most important issue in the transition to sustainable development is the mechanisms for the implementation of environmentally oriented strategies [3]. Strategies can relate to the development of certain types of activities, industry, and security. At the same time, the principle of applicability of the mechanisms described in strategic documents remains important. The authors are convinced that the specified UN sustainable management strategy can serve as a model for the management strategy of



any entity - from the state to an individual economic enterprise to achieve the environmental aspect of sustainable development goals in the relevant territory.

2. Materials and methods

The main idea of this study is to identify problems and ways to solve them when introducing environmentally sustainable management into the system of public administration of a separate state using the example of Russia. The study used the method of comparative analysis. We analyzed data on the state of water resources, on the number of polluted cities from atmospheric air pollution, on the volume of production and consumption waste generation. In order to develop theoretical provisions and practical recommendations for the development of measures for the greening of public administration, scientists studied the work of scientists concerning general issues of the environmental aspect of sustainable development goals [4], the role of environmental safety in the process of sustainable development [5-6]; the role of the state in solving environmental problems [3], which influenced some of the conclusions of the study.

To ensure a unified approach to the development of measures to improve efficiency and introduce environmental sustainability into the public administration system, general scientific methods were used: the structural-functional method (to determine the place of environmental management in the system of measures to ensure sustainable development).

We also used tabular methods of presenting information.

3. Results and Discussion

The continuing irrational, depleting use of natural resources, the negative impact on the environment (pollution of atmospheric air, water resources, soil, reduction of forest cover and biodiversity) has reached critical values. The solution of these problems with the help of greening any processes is today a priority within the framework of the formation of a national policy in the field of rational nature management and environmental safety. At the same time, the introduction of greening and the restoration of environmental friendliness is consistent with the goals of sustainable development in the environmental sphere in ensuring the environmental sustainability of cities, in protecting and restoring terrestrial ecosystems and promoting their rational use, rational forest management, combating desertification, stopping and reversing the process of land degradation and stopping the process of loss biodiversity. Governments use a variety of means and ways to achieve sustainable development goals. Understanding the importance of all means and measures, in our opinion, it is necessary to note precisely the management mechanism in the system of achieving sustainable development goals, as a binding and ensuring the coordinated work of other elements. Such management can be carried out at various levels within one state - from national to local and public, and, taking into account the goals, it can be called sustainable management.

The first stage of the study consisted in a thorough study of the primary sources. The authors are of the opinion that it is important to give legitimacy (legality) to the idea of sustainable management in the framework of achieving sustainable development goals. Indeed, despite the obviousness of the need to comply with all measures to achieve sustainable development goals, in order for the mechanism to implement them to work, it is necessary to "legalize". It is in this way that knowledge about the need for sustainable development is transformed in the consciousness of society into proper behavior and duty.

Let us turn to the legislative experience of Russia in the field of giving legal form to the ideas of sustainable development. Russia began to move towards sustainable development from the moment the President of the Russian Federation signed the State Strategy of the Russian Federation on Environmental Protection and Ensuring Sustainable Development in 1994, according to which, in order to ensure sustainable development, the main areas of activity are envisaged: creating a healthy living environment for people in urban and rural settlements; prevention of pollution of atmospheric air and water bodies; environmental education and education of the population. Let us compare other legal acts that consolidate the ideas and the path of transition to sustainable development in order to

correlate the government's common understanding of these ideas and a single approach to the formation of a mechanism for achieving goals through sustainable management (table 1).

Table 1. Legal framework of Russia for sustainable development.

Normative act	Regulatory objectives	Content of the control mechanism
The concept of the transition of the Russian Federation to sustainable development	creation of a legal basis for the transition to sustainable development	development of a system of documents: state strategy; long-term and medium-term forecasts
Environmental doctrine of the Russian Federation	preservation of natural systems, maintaining their integrity and life-supporting functions for the sustainable development of society, ensuring the environmental safety of the country	ensuring environmental control and supervision; development of state regulation; implementation of strategic environmental impact assessment
Federal Law "On Environmental Protection"	determination of the legal framework of state policy in the field of environmental protection in order to strengthen the rule of law in the field of ensuring environmental safety	support for the independence of state environmental supervision; taking into account the natural and socio-economic characteristics of territories in the implementation of economic activities
Fundamentals of state policy in the field of environmental development of the Russian Federation	solving socio-economic problems that ensure environmentally oriented economic growth, preserving a favorable environment to ensure environmental safety	establishment of a criterion for assessing the effectiveness of the activities of public authorities - the state of the environment and ecological safety in the relevant territories, determined on the basis of a system of objective indicators and indicators

Because indicators of environmental pollution are indicators of achieving sustainable development goals in the environmental aspect, which should be lower every year, at the second stage we analyzed data on environmental pollution in dynamics. Let us draw attention to the key challenges highlighted by the authors of the United Nations Sustainable Management Strategy 2020–2030: persistent serious problems and risks associated with solid waste and wastewater; low level of use of renewable energy sources due to dependence on expensive and polluting technologies; overexploitation of natural resources, including deforestation, land degradation, depletion of water resources and degradation of ecosystems. In accordance with the stated problems at the global level, we will analyze the indicators in similar directions: associated with solid waste, with air pollution and water pollution (figures 1, 2 and 3).

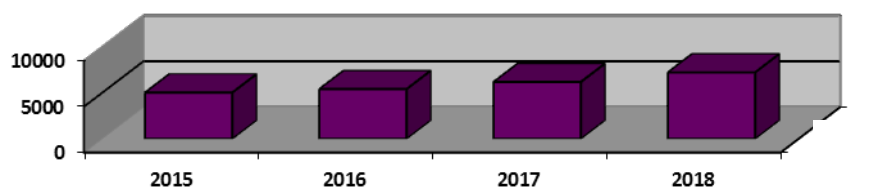


Figure 1. Dynamics of production and consumption waste generation in Russia as a whole, 2015-2018, million tons.
Compiled by the authors.

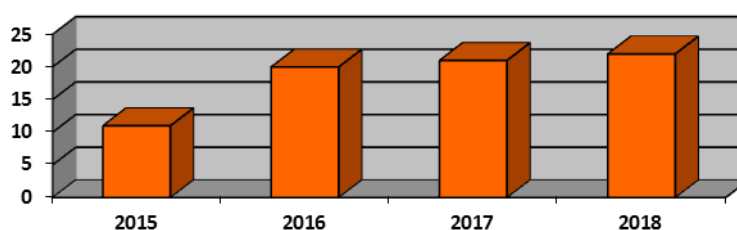


Figure 2. Dynamics of the number of cities in Russia with the highest level of air pollution, 2015-2018.
Compiled by the authors.

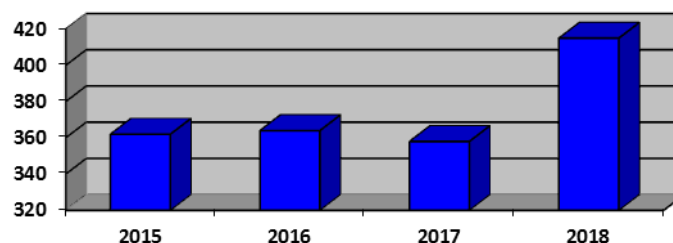


Figure 3. Dynamics of the volumes of polluted wastewater discharge in Russia (on the example of the North Caucasian Federal District), 2015-2018, million m³.
Compiled by the authors.

The given data indicate that for the period 2015-2018. there was an increase in the amount of production and consumption waste generation in the country as a whole, an increase in the number of cities with the highest level of pollution in the country as a whole, an increase in the volume of discharge of polluted wastewater into water bodies using the example of one Decreased for 25 years) [7]. In this regard, it is difficult to say that the state is taking all possible steps towards sustainable development. The state, assuming obligations to comply with the plan for achieving sustainable development goals, is an example, a model for other participants in the process (civil society, organizations). If the state itself does not fulfill the required minimum of requirements, then the other participants in the process are also not motivated to fulfill them. Complicating the situation in Russia is the fact that the main large industrial enterprises were built in the middle of the last century, which today has a doubly negative effect on the environment - the level of pollutant emissions is increasing every year [8]. But any organization is interested in introducing optimal strategic approaches to management in order to reduce environmental degradation along with gaining productivity gains [9],

therefore it is necessary to determine the causes of failures in achieving sustainable development plans and develop measures to activate the process of achieving them.

Taking into account only the narrow direction chosen for research (management system), we can name the internal threats to the formation of environmental sustainability, which in general hinder the achievement of the planned sustainable development goals:

- A low level of performance of the duties of officials of management bodies (not timely resolved or unresolved issues that are important for environmental protection);
- Ambiguity or vagueness in the establishment of the object of management (when one and the same natural object or territory becomes controlled by management bodies of different levels, as a result, there is a confusion or conflict of jurisdiction of the authorities);
- Incorrect application of rapid environmental response measures (for example, all environmental assessment methods are applied late in the design of economic activities to give a final idea of the environmental performance of the cycle, and a more effective way would be to address environmental issues at an early stage of design, along with structural reliability and safety [6]);
- Weakening of environmental legislation (sustainable development is possible only in favorable environmental conditions, which depend on compliance with environmental legislation [10]);
- Fragmentation of state environmental monitoring (insufficient and incomplete data on natural objects);
- Ineffectiveness of environmental supervision and control (control of environmental pollution in some areas of activity is carried out only by a quarter, and in some it does not exceed 10% of the indicators for emissions of pollutants, which indicates that in Russia there is practically no complete control over environmental pollution in all spheres of activity [11];
- Weak scientific support (weak funding for scientific research);
- Low level of ecological culture.

Therefore, the need to intensify efforts to achieve sustainable development is recognized at the international and national levels. Moreover, the first step that governments need to take is greening public administration. The measures proposed by the Russian Federation in terms of the organization of management are in principle similar to those proposed in the UN Strategy (see table 1), among which one can single out: improvement of environmental legislation; application of financial incentives for environmentally oriented enterprises [12]; taking into account the natural and climatic factors of the region in the context of the socio-economic development of the country [5], but today these measures are clearly not enough. In addition to the measures taken, the following measures should be recommended as a guide to action specified in the UN Strategy:

- Implementation of environmental management systems in accordance with international best practice;
- Work on continuous improvement of specific targets for common actions for developed and developing countries;
- Encouraging innovation and financing the implementation of innovative measures.

4. Conclusion

The study found that the efforts made by governments are currently insufficient. Therefore, efforts to integrate sustainability into the governance structure and encourage environmental innovation should be intensified. Concentration of efforts of states in the process of achieving sustainable development in the management segment, namely on making management activities environmentally friendly, will allow:

- To implement the goals of sustainable development at all levels (state support for the introduction of innovative resource-saving, environmentally friendly and efficient technologies);
- To increase confidence in the governing bodies and set an example for other business entities in greening their management activities;
- Promptly manage internal environmental risks;
- Achieve financial savings through the rational use of resources.

Acknowledgments

The reported study was funded by RFBR according to the research project No 19-011-00416.

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