

## URBAN ENVIRONMENTAL IMPACT DECREASE AS A TARGET OF SUSTAINABLE DEVELOPMENT IN RUSSIA

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**Abstract:** The Russian Federation as a part of the international community has adopted the goals of sustainable development and revised its national policy in accordance with the targets set up by the United Nations (UN) General Assembly resolution “Transforming our world: The 2030 agenda for sustainable development” (2015). The scope of this research is on target 11.6 of The Agenda, in particular: “By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality...”. The objective of the article is to study the target’s 11.6 separate part of the “Transforming our world: The 2030 agenda for sustainable development” (2015). The importance of this study is to find the factors that impact the urban environment on sustainable development in Russia. This will allow for adjustments to national policy in line with the objectives set by the UN General Assembly resolution. The sufficient elements of best available techniques integration as well as the quoting method in this sphere of public relations are defined. Also, particular financial tools and activities of the national supreme audit institution are described. Significant tools to attain target 11.6 should be the introduction of best available techniques and efficient traffic arrangements.

Keywords: The 2030 agenda, air quality, environmental law, supreme audit institutions.

### Introduction

The Russian Federation as a part of the international community has adopted the goals of sustainable development and revised its national policy in accordance with the targets set up by the UN General Assembly resolution (Transforming Our World, 2015). The scope of this research is on target 11.6 of the Agenda, in particular: “By 2030, to reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality...”. The article focuses on the target’s 11.6 separate part. Certainly, it does not negate the 2030 Agenda’s principles of integrity, indivisibility and balance of all goals and targets (Transforming Our World, 2015).

In the author’s opinion, this method is an applicable scientific technique that will allow us to study the aspect more constructively and in greater detail. We support the point of view concerning the complexity of sustainable development goals (Porfiriev & Bobylev,

2018). Some examples of Russia’s public bodies performing their functions to reduce the environmental impact of cities by limiting air pollution will be systematically analysed. The aim is to demonstrate the intention of the authorities to fall in line with Russia’s national sustainable development goals.

A. Kudrin (2018) supposes that in order to create opportunities for technological development and human capital development, Russia “...will have to significantly strengthen the infrastructure of agglomerations and cities, improve the quality of the urban life and the environmental situation”. The Accounts Chamber of Russian Federation is the national supreme audit institution (hereinafter referred to as SAI of Russian Federation). Its activities are regulated by the Constitution of Russian Federation, generally recognized principles and rules of international law, international treaties, the Federal law Act “On the Accounts chamber of Russian Federation”, other Federal law

Acts, as well as international legal principles of independent audit.

SAI's of Russian Federation functions of state financial control and audit, as well as checking the effectiveness of budget funds use are among the main functions of this authority. The Accounts Chamber of Russian Federation also performs a number of tasks, such as organization and implementation of control over the objective and effective use of Federal budget funds, audit of the feasibility and effectiveness of achieving the strategic goals of socio-economic development of Russian Federation, analysis of identified shortcomings and violations in the process of forming, managing and disposing of Federal and other resources (Federal Law No. 41-FZ, 2013).

In addition, since Russia has been a member of International Organization of Supreme Audit Institutions (INTOSAI) – 1995. Thus, the Supreme Audit Institutions (SAI) of Russian Federation applies its own standards based on INTOSAI principles, standards and guidance's for external state audit and general requirements for external state and municipal audit standards for conducting control and expert-analytical activities (Federal Law No. 41-FZ, 2013). E.g., special attention should be paid to the Guidance 5202 “Sustainable Development: The Role of Supreme Audit Institutions”. According to this document the Accounting Chamber of Russian Federation takes part in strategic planning and assess the risks of failure in achieving national sustainable development goals and targets (The ACRF Vision, 2018). As it is fixed in the GUID 5202 “...Targets for sustainable development might be subject to audit. Targets may be set for the end-state or outcome desired, e.g., clean air, or the underlying cause or activity...” (Sustainable Development Targets, 2020).

During the XXIII Congress of the INTOSAI in September 2019, the powers of the president and chairman of the governing council of INTOSAI for the next three years were transferred to the Head of the Accounts chamber of the Russian Federation. One of the two topics of the Congress was devoted

to “sustainable development”. As a result of the Congress, the Moscow Declaration of XXIII INCOSAI (2019) was adopted, which determined that each SAI could benefit society by providing independent external oversight of the achievement of nationally agreed goals, including the sustainable development goals. The SAI's of Russian Federation contribution of the implementation the sustainable development goals in Russia is following:

- Holding high-level meetings to discuss current issues for achieving the SDGs (The Second Meeting of the Heads of the BRICS Supreme Audit Institutions (2020); analysis of indicators of the sustainable development goals in the existing and developing strategies of regions and cities, programs and concepts for the development of economic sectors, as well as issues of stimulating business to introduce resource-saving technologies and care for people's health.
- Reports on national goals progress, including SDGs performance (The ACRF Monitoring, 2019).

In accounts chamber's view national targets on improving air quality haven't been ambitious enough until July 2020: “...the measures do not cover the sources of those pollutants that exceed the permissible standards, or they are insufficient to reduce the impact to an acceptable level” (The 2020 ACRF, 2020).

The aim of the article is to study the target's 11.6 separate part of the “Transforming our world: the 2030 agenda for sustainable development” (2015). The importance of this study is to find the factors of the impact of the urban environment on sustainable development in Russia. This will allow for adjustments to national policy in line with the objectives set by the UN General Assembly resolution.

#### ***Characteristic of Best Available Techniques as a Method***

According to principles of integrity, indivisibility and balance of all goals and targets

it is obvious that the air quality improvement also demands industrial upgrades. E.g., the 2030 Agenda article 9.b (Goal 9): “Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities” (Transforming Our World, 2015).

The idea of introducing “environmentally-friendly” technologies appeared in the middle of the 20<sup>th</sup> century. It was at this time that the development of industry reached a massive scale, and therefore a number of leading European countries, as well as the United States, came to the next conclusion (The 1990 Amendments, 1994). They stated that if the situation does not change, then in the near future our planet will become practically uninhabitable. Around the 1970s, the concept of cleaner production began to develop in the United States (The 1990 Amendments, 1994) and Europe (Chang *et al.*, 2020). According to E. Fisher (2019), “Environmental law will constrain action and create immediate winners and losers. In the long-term improved air quality is a benefit to all, but in the short term it will require people to change their practices”. In other words, it is not possible to improve air quality immediately. First of all, it’s necessary to come up with paths to reduce pollution. Moreover, it will take the time for these methods to start having a positive effect.

It is well known that in large cities transport and industry make the greatest impact on urban air quality. Therefore, rational traffic and industrial modernization would reduce air pollution (Niva *et al.*, 2019). Certainly, in theory, we can speculate about “moving plants outside the city” and re-profiling employees working there.

However, for the Russian society and economy at this stage, this option is practically impossible. Accordingly, describing in this part of the article the introduction of best available techniques (BAT) as a method of achieving the target 11.6, the emphasis is made on improving

air quality in cities. In the United Kingdom until 1990 there was a requirement to apply the principle of “Best Practical Means” (BPM). According to English researcher, this principle was the basis of environmental supervision in the country before implementation BAT (Biggeri, 2017).

The first part of the definition of the best available techniques implies that all measures should be taken to protect the environment (environmental protection should be carried out at every stage), the second part specifies that environmental protection should be carried out only if it is economically beneficial. This comes from the very philosophy of UK environmental legislation, which is based on balancing (comparing) the protection of the environment and the material well-being of stakeholders (Biggeri, 2017).

But in the UK, the argument of high cost (i.e., economic disadvantage) is of great importance, a decisive one. It is appropriate to refer to the UK Environment Protection Act (1990), according to which the “extended time scale” for the start of mandatory application of BAT in industry was quite long (Biggeri, 2017).

And now the issue should be considered according to Russia. We can say that the first mention of BAT appeared in Russian legislation in Federal law Act “On Environment Protection” (2002). However, at that time, instead of the criterion “availability”, the legislator used the criterion “existence”. In addition, the procedure for applying technologies, as well as the specificities and time of their implementation, were not established.

However, over time, various experiments on the introduction of BAT were managed at the local level. In practice, a striking example can be made by some enterprises which first had started to introduce BAT systems. Some wood-paper corporations had developed an industry-wide system of emissions and waste disposal technological regulation based on the BAT introduction with maximum viewpoint on Russian realities (Fan *et al.*, 2018). The

public administration system in environmental protection had kept reforming.

In particular, the Russian Government had to submit several draft Federal law Acts:

- To develop legal and economic mechanisms, including taxes, which encourage economic entities to reduce their negative impact on the environment, such as the introduction of the best technologies.
- To improve the system of financial support for environmental protection and the introduction of “environmentally effective technologies”, including using funds from environmental funds, tax incentives, funds invested in environmentally effective and environmental technologies credited to the payment for pollution.

At the same time (from 2010 to 2013), the translation of the European BAT references (BREF) was carried out and their implementation in the Russian legal field as recommended and voluntary use standards. The Federal law Act “On environment protection” amendments (2014) had come into effect on January 1, 2015. The law introduced article 28.1 “Best available technologies”, as well as Article 4.2, in which objects that have a negative impact on the environment are classified into four categories. It was determined that these are the I category objects that have a significant negative impact on the environment that should be considered as areas of application of BAT. Also, in 2014, the Russian government approved the 2015-2017 schedule to create BREFs information and technical manuals BAT (BAT ITMs) (Order of the Government, 2014).

It was allowed to use an international information technology BREFs while developing a “domestic” BAT ITMs; moreover, paragraph 2.3 of the Order of Formation and Activities of the Technical Working Groups (TWG) (Order of Rosstandart No. 1225, 2015), requires specifying the foreign or international equivalent of the directory that the TWG needs to develop (Federal Law No. 7-FZ, 2002).

Best available techniques in the Russian legal field are determined as technology for production of goods, performance of works, provision of services, set up on the basis of modern achievements of science and the best combination of criteria for environmental protection. It is also should provide the following: The technical possibility, not excessive costs, experience of the use in Russia.

Therefore, such a criterion of BAT as “economic efficiency of implementation and operation and the period of implementation” is useful and significant. So, the Russian Industry and Trade Ministry set several approaches to the analysis of this criterion. The costs of implementing and operating technology and the benefits of implementing it are estimated using the cost-benefit analysis (CBA) method. If the implementation of various technologies gives positive results, then the technology with the highest performance is considered the one that gives the best price-quality ratio.

Alternative options for “cost-effectiveness” analysis are also offered. The second part of this criterion (implementation period) is associated with “the payback period of a certain technology in comparison with the costs related to ensuring environmental protection”. The Russian Industry and Trade Ministry believes that it is necessary to assess the speed with which BAT can be implemented since it is the timing of implementation that can be critical for the industry.

This Federal law Act allows the BAT ITMs to develop, taking into account the techniques, equipment, raw materials and other resources available in Russia, as well as taking into account the climatic, economic and social characteristics of the Russian Federation. This will significantly improve and speed up the process of introducing BAT into the Russian industry. Thus, this author supposes, that the BAT introduction is a method for getting air cleaner and fulfilling target 11.6 of The Agenda, in particular: “By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality”.

### ***Tax and Non-tax Tools to Encourage BAT Integration***

It is good to mention, that usually, the cornerstone of any innovation (especially if it is necessary to take into account environmental protection, social benefits, and economic profits) is financing. Under paragraph 41 of the 2030 Agenda, “Public finance will play a vital role in providing essential services and public goods and in catalyzing other sources of finance” (Federal Law No. 7-FZ, 2002).

If funds are needed, but the entrepreneurs are not ready to spend money in full measure, what should be undertaken by the authorities? To provide allowances so that investors themselves could use the savings to modernise the equipment, implement BAT, and thereby, meet the Agenda 11.6 target as part of the sustainable development goals.

Preferences in calculating corporate profit tax with a “faster depreciation term” mechanism. It means that for financial stability, revenues from corporate profit tax to public budgets, the investment in fixed assets reduces the taxable base not at all sums at the year of spending once time, but gradually, throughout the equal parts annually in proportion to the fixed asset’s number of “useful life” years. The property costs 12 million rubles (value).

In 12 years, 1/12 of the value will annually relate to reasonable expenses that reduce the tax base for corporate profit tax.

Preferences to stimulate the BAT fixed assets investments are following. The use of “faster depreciation term” coefficients allow to determine the tax base for corporate profit tax to proceed from the “artificially reduced” terms of depreciation. So, the “useful life” is 12 years, but the corporate property is related to BAT and therefore, a depreciation term coefficient can be applied (Tax code of the Russian Federation, 1998).

Thus, if coefficient 2 is used, the BAT fixed assets value of 12 million rubles will be annually referred to as 1/6 for six years term, instead of 1/12 for 12. It is faster to reduce the tax base

for corporate profit tax than for the common cases are an example of how federal authorities stimulating private spending on BAT.

Commonly, the corporate property tax rate in Russia is set up at 2.2% per year from the fixed assets (real estate) value. Regional legislators define rates within this maximum indicator. In the case of BAT integration, the rate may be reduced, which encourages entrepreneurs to invest in BAT on the territory of certain Russian regions. There are cases that illustrate how regional authorities encourage investment in the property needed to improve air quality in cities through a reduced tax rate. This is directly related to the achievement of the target 11.6 of the Agenda 2030.

The Krasnoyarsk Regional Law No. 8-3410 “On Corporate Property Tax” (2007) set up a 0.1% rate for bodies that reduce air pollution. Lower rate is valid until the end of 2030. There are certain conditions to be followed: It has to be a new constructed property, polluting air emissions have to be lowered by 20% compared to the starting level in large industrial centers, investments of at least 10 billion rubles, starting from January 1, 2019.

It is an example of how regional authorities stimulate private spending on BAT. Government subsidies on bonds. The essence of this state support mechanism is to reduce the cost of borrowed money for the investor who spent it on the best available technique’s introduction. Federal authorities involve national entrepreneurs and banks in the process of financing BAT introduction. For these purposes, the state is ready to provide subsidies to partially co-finance the costs of bonds’ servicing (Resolution of the Government, 2020).

To do this, the following issues should be dealt with the bonds should have a certain target - the introduction of BAT, subsidies for coupons should be provided on a competitive basis, the target result should be confirmed (step-by-step pollution reduction).

Generally, the Federal government “repays” up to 70% of the paid coupon. But in the case of



purchasing national industrial products, goods or services, subsidies can “reach” up to 90% of the paid coupon. Making loan money “cheaper” for investors is a specific instance of private spending on BAT stimulation.

### ***Analysis of the Target Setting Method***

Since 2020, Russian legal field has been setting targets for reducing air emissions – quotas. Similar to the United Kingdom and European practice, the Russian legislation also establishes two terms for BAT implementation. It depends on socio-economic conditions for each specific enterprise, generally, it is up to seven years, but for some objects – up to 14 years (Federal Law No. 7-FZ, 2002). The duration of the investment cycle of industrial companies for the introduction of new technologies is from 6 to 10 years. The transition period for the introduction of BAT is from 7 to 14 years. However, BAT cannot reduce transport emissions. It is obvious that the traffic issue is significant for urban air “cleaning”. In other words, BAT is the right tool to solve problems – but quite “slow” and incomplete. Probably for these reasons, in addition to the BAT method described above (for large industrial bodies), the Government was forced “to create” additional legal mechanisms (including transport and medium business).

So, in July 2019, the Federal law Act No. 195 was adopted. It has established a Quoting method for a selection of Russian cities as an experiment. Within Federal Law Act No. 195 model air quality calculations should be carried out. They would define the causes and sources that determine a significant contribution to emissions in each city. Based on this scientific research, authorities should set up specific targets and indicators to improve air quality in these cities by 2030. The Russian Natural Resources and Environment Ministry, Federal Environment Supervisor (Rosprirrodnadzor) and regional authorities in 10 territories have been granted several new powers to form comprehensive plans for air pollution reduction in 12 pilot cities, as well as the right to coordinate plans of private bodies. Pilot cities are:

- Bratsk – more than 220.000 agglomeration (Irkutsk region),
- Chelyabinsk (about 1.200.000) and Magnitogorsk (more than 400.000) – both in the Chelyabinsk region,
- Cherepovets – more than 300.000 (Vologda region),
- Chita – more than 350.000 (Zabaikalsky region),
- Krasnoyarsk (about 1.100.000) and Norilsk (more than 180.000) – both Krasnoyarsky region,
- Lipetsk – more than 500.000 (Lipetsk region),
- Mednogorsk – about 25.000 (Orenburg region),
- Nizhny Tagil – about 350.000 (Sverdlovsk region),
- Novokuznetsk – about 550.000 (Kemerovo region),
- Omsk – more than 1.100.000 (Omsk region).

It can be assumed that the decision-making procedure as well as the list of selected pilot cities are criticized by national scientists. B.A. Revich *et al.* (2020) suppose that “the project developers chose these cities from a formal rather than a substantive position, i.e., based only on the pollutant emissions mass without taking into account their dispersion in the air and public health”.

It is possible to partially agree with their arguments. However, there is no doubt that the list of cities will be changed. Most likely it will be expanded no later than 2021. Moreover, Article 7 of the Federal Law of the Russian Federation No. 195-FZ (2019) defines that business owners are required to conduct an inventory of air pollutant emissions not only from stationary sources, but also from mobile sources. Until then, the Russian legislation had not set limits on the total mass or volume of emissions for mobile sources. Previously, such a requirement had been set up only for stationary

sources. So, in other words, the law establishes preconditions for reducing traffic air pollution.

The Quoting method was introduced into the Russian legal field as an experiment with a time limit. The experiment term does not coincide with the BAT introduction term (Pickering, 2018). This researcher is sure that the validity period of Quoting method will be extended to 2030.

### Conclusion

The significant tools that Russia should use to reach or exceed the 2030 Agenda's target 11.6 which is a part of its sustainable development goals in the urban clean air's field should be the introduction of BAT and efficient traffic arrangements.

The use of BAT should significantly increase the level of urban environmental safety, reduce the pressure of industrial growth on air pollution and prevent economic losses. Per product capita/per time capita allowed limits of pollutant emission have been established by the Federal Natural Recourses and Environment Ministry orders based on 51 approved BAT ITMs. It's essential to renovate outdated equipment to achieve the level of emissions set with BAT ITMs and an improvement in air quality as well as reduce industrial emissions in cities in line with UN directives.

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