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## The Mechanism to Eliminate the Accumulated Damage to the System of Socio-Economic Development of the Region

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**Abstract:**

*The article is devoted to the problem of the formation of the mechanism to eliminate the regional detriment in the context of recent changes in Russian legislation and the implementation of public programs in this area. As the object of the study the authors have selected the Rostov region as one of the subjects of the Russian Federation on the territory of which has been the target of accumulated environmental damage. The elimination of this damage will expand the capacity to attract investment and will improve the quality of life of the local population.*

*The article analyzes the institutional, legal and economic conditions of the Russian Federation that allow the regions to implement measures for to reduce and eliminate the accumulated harm to environment. The documents that form the basis include the strategic documents explaining the process of governing of the federal and regional authorities' interaction in implementing the projects dealing with the existing damage.*

*As a result of the study the authors have come to the conclusion that authorities in the Rostov region must form a coherent mechanism that provides efficient interaction for all the affected parties at regional level. Authors propose a contour description of this mechanism, carried out on the basis of the main requirements (targets, aims, objects, subjects and tools of impact) and form the proposals to ensure its effective functioning in the Rostov region.*

**Keywords:** *Region (subject of the Russian Federation), accumulated environmental damage, recreation of natural ecosystems, environmental-economic policy.*

**JEL Classification Codes:** *Q20, Q28, Q30, Q38, R10.*

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## **1. Introduction**

For many Russian regions, including the Rostov area it is common to have a significant territory that is exposed to the effect of so-called “accumulated” environment-economic damage. This damage is defined as “left-over costs that have to be bared due to the fact of reducing/eliminating the detriment to the local environment, health or property that resulted from continuous economic activity”. It is an interpretation of international experience in dealing with accumulated environmental damage in the context of the Russian Federation based on a Research conducted by the World Bank on the accumulated environmental damage in the Russian Federation. In comparison with the EU member countries that have started to experience a certain deficit of territorial resources in the first half of the previous century (Liapis *et al.*, 2013), in the Russian Federation such deficit is negligible. This resulted in the matter that the need to economically activate the territories that were previously exposed to accumulated environmental damage was never urgent, therefore was often underrated and looked over.

However there are at least two territories in the Rostov region that suffer from such kind of damage today, these include previously working coal mines, that have suffered from all possible unwanted consequences of accumulated coal extraction, as well as small rivers that cannot cope with continuous pollution from manufacturing (the most striking example is River Temernik). The presence of such territories in the region lead to deterioration of efficiency of its environmental, territorial and natural resources potential. At the moment the set target of the Rostov region involves economic restructuring that requires more active involvement of additional investment into the realization of structural priorities of the regional development. The region is considered of the investment attractions of the Russian Federation; however the current volumes of investment are not sufficient to solve the underlying problems (Shekhovtsov and Abdulaev, 2016; Ponomareva *et al.*, 2014; Yaroshenko and Khaibulin 2017; Epifanova *et al.*, 2016; Shekhovtsov *et al.*, 2017).

Despite the fact that the Rostov region contains a significant number of non-utilized territory, regional and municipal authorities, investor and enterprises are faced with the deficit of production platforms with access to infrastructure, while involved in the problems of attracting investment and developing progressive manufacturing projects. Yet, the region has relatively large territories of accumulated damage that have the necessary access to infrastructure. These territories could potentially be reactivated for economic activity, thereby filling the gap for production platforms. While dealing with the problems of small rivers, it is necessary to focus on the fact that most of the time they are the central objects of regional recreation. One third of the river Temernik flows through Rostov-on-Don, however it cannot be currently considered as recreational area, and hence certain projects related to well-being cannot be fulfilled.

Current situation is characterized by the absence of centralized regional mechanism that could eliminate the accumulated damage, resulting in effective interaction of all the parties interested. Further research and innovation is need for such mechanism to be formed. The article considers the conditions need for such mechanism to function, setting the targets, objects, central subjects (participants), instruments of activity stimulation, as well as the most effective forms of interaction of all the interested parties.

## **2. Theoretical, Informational and Empirical, and Methodological Grounds of the Research**

Theoretical basis of the research is based on the main theories of economic nature utilization, notably in the areas of elimination of accumulated environmental-economic damage, regional and territorial economics, state control and socio-economic regional development regulation (Thalassinos *et al.*, 2012; Pociovalisteanu and Thalassinos, 2008). All of these relate to the problems of increasing the effectiveness of interaction between various subjects of territorial development (business, government, investors, population, non-commercial organizations) and attraction of investment into the realization of regional projects to eliminate the accumulated damage.

The main methods used for conducting research are the method of analogies, systematic approach, logical and comparative analysis of legal and program-based documents at federal and regional level, directed to stimulate the activity to eliminate the accumulated environmental damage. Informational basis of the research relies on the official data provided by the Federal Service of Government Statistics of the Russian Federation and its regional branch in the Rostov region, legislative acts of the Russian Federation and the Rostov region in the areas of regulation and support for elimination of accumulated environmental damage.

## **3. Results**

The problems of eliminating the consequences of accumulated environmental damage in the Russian Federation were overlooked for a very long time, which limited the possibility of necessary regulation. Despite the emergence of the societies' need for the change in the last century the legal basis for such regulations started to develop only recently. The first official definition of "objects of accumulated environmental damage" was formulated in the Order of Rosprirodnadzor (2012) with the accordance to which these objects were defined as «polluted territories, including abandoned territories, that formed as a result of continuous economic activity, as well as landfill sites and other objects (buildings, constructions, polluted areas), which were polluted or the territory around them was polluted. Economic activity regarding those objects was carried out in the past, leaving waste, that has a harmful effect on the environment. The actual accumulated environmental damage was defined in the same legislative act, as "damage

expressed in the monetary equivalent, caused to the surrounding environment and its components as a result of economic or other activity, including the breaching of nature-protective legislation, as well as costs to eliminate the negative consequences of the resulting detriment”. (Order of Rosprirodnadzor 2012). Despite the fact regarding these formulations, there have been a large number of remarks from various participants of nature utilization process and its regulations (Solovianinov, 2013). About the development of the Russian legislation in the sphere of elimination of accumulated ecological damage), and the fact that the order was cancelled, the matter of attempt to solidify the official term “accumulated ecological damage” has allowed for further development of regulating instruments.

Later in 2016, there were amendments introduced in the Federal Law of the Russian Federation № 7-FL as of 10th of January 2002 “About the protection of Environment”, in accordance to which simple formulations were introduced, defining the following:

- accumulated damage to the environment - harm done to the environment, as a result of continuous economic or other activity, the responsibilities for the elimination of which were not fulfilled or were not completely fulfilled (FL RF, 2016);
- objects of accumulated environmental damage - territories and areas of water, that display the accumulated environmental damage, objects of capital construction and dumping sites, that are considered as the sources of accumulated environmental damage” (FL RF, 2016);

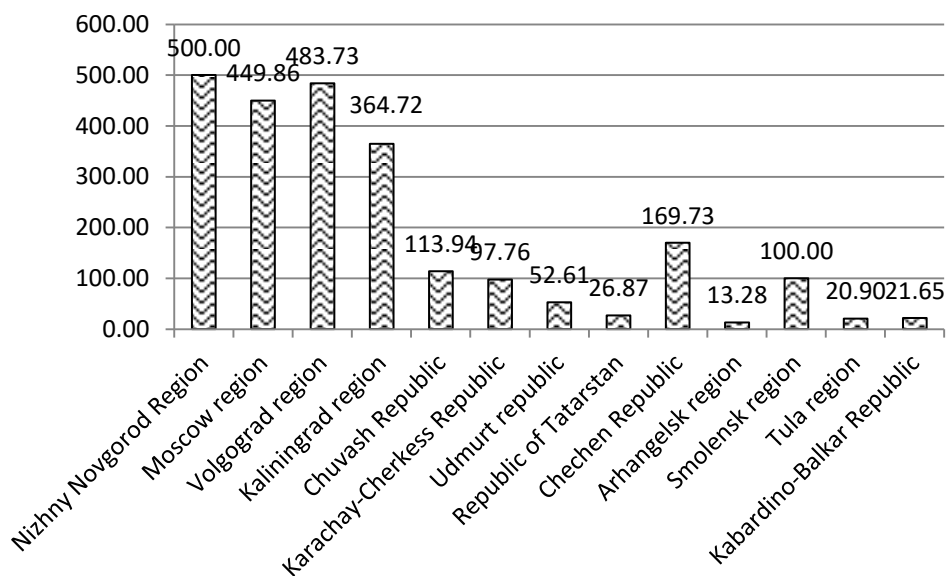
Parallel to this in 2014, changes were introduced into the State Program of the Russian Federation “Protection of the Environment” in 2012-2020 (Executive Order of the Russian Federation as of 15th of April 2014 № 326), the subprogram of which “Regulation of the quality of the environment” includes the target for elimination of accumulated ecological damage, as well as target indicators, reflecting the progress on the way to achieve the target: total area of land, exposed to the negative effects of accumulated environmental damage, and the share of eliminated waste and other pollution types within the objects of accumulated environmental damage in the total volume of accumulated waste (State Program of the Russian Federation “Protection of the Environment” in 2012-2020). It also points out that the subjects of the Russian Federation can take part in the process of elimination of accumulated ecological damage.

In the Project of Strategy of ecological safety of the Russian Federation pre 2025, the elimination of accumulated ecological damage and recreation of degraded natural ecosystems are considered as one of the crucial targets of government policy in the sphere of ecological protection. This document plans for concrete target indicators, increasing the share of liquidated objects of accumulated ecological damage from 1 to 20% of the total volume by 2015 (Strategy of ecological safety of the Russian Federation pre 2025. Project).

Recently in 2016 concrete program instruments have been developed at federal level. These aim at elimination of accumulated damage. Moreover, the prioritized project “Reduction of negative environmental impact by elimination of the objects with accumulated environmental damage, as well as reduction of the share of landfill in communal waste” (short for - Prioritized Project “Clean Country”). One of the priorities of such project is “Accumulated Environmental Damage”. The project plans for “reduction in the area of land negatively affect by the objects with accumulated environmental damage by 1,45 thousand hectares by 2025”.

In August 2016 the Rules for Provision and Distribution of federal subsidies for the subjects of the Russian Federation have been introduced, regarding the support for the projects, dealing with waste recycling and elimination of accumulated ecological damage (Executive Order of the Russian Federation as of 13th of August 2016 № 790). A group of a concrete projects to finance the works to eliminate the consequences of such damage have been formed, given the information about the presence of such objects (containing the damage) provided by the subjects of the Russian Federation, as well as methods to distribute the federal subsidies set by the Executive Order mentioned above (Executive Order of the Russian Federation as of 13th of August 2016 № 790). The projection is that some of the regions will receive these subsidies in 2017 (Figure 1).

**Figure 1.** Distribution of subsidies to the subjects of the Russian Federation aimed to finance the regional projects in the spheres of waste treatment and elimination of accumulated environmental damage in the context of the project «Clean Country», mln. RUB, 2017.



**Source:** Materials provided by the official website of Ministry for Natural Resources and Ecology of the Russian Federation - access via <http://www.mnr.gov.ru/regulatory/detail.php?ID=341890>.

From the data above it is clear that the Rostov region has not been included in the 2017 group of regions that received the support from the federal budget. This is due to the fact that at present time there is no information about the objects of accumulated damage in the region. Therefore a regional mechanism, that allows inclusion of Rostov region into the federal programs to eliminate accumulated damage, is required.

#### **4. Conclusions and recommendations**

The analysis presented above shows that there is an institutional, legal and economic basis that allows the subjects to implement policy regarding the stated problem in the Russian Federation. However in order to reduce the impacts of accumulated ecological damage in the Rostov region it is necessary to form a centralized mechanism that allows for effective interaction between all the interested parties at regional level.

We propose a contour description of such mechanism, to eliminate the accumulated damage:

1. Aims for the functioning of the mechanism. The overall aim is to liquidate the negative economic-environmental impact that has formed on the territory of the region as a result of accumulated ecological damage. If we consider the practical side of the problem, then we are not only dealing with ecological effects to improve the environment, but also include socio-economic effects that will be seen in the improvement of quality of life of the population, improvement of health, as well as shift in the potential of the region for economic development (for example via economically reactivating the territories exposed to accumulate damage and improvement of their investment attractiveness).

In order to achieve these aims, the mechanism must be able to solve the following:

- creation of stimulus for the enterprises and investors in realization of projects to eliminate the accumulated damage in the region;
- ensuring the effective interaction of all the interested parties of economic relationship, in any way related to utilization of the territory exposed to accumulated damage (enterprises, investors, municipal authorities, population and etc.);
- attraction of various additional informational sources to finance the projects to eliminate the accumulated damage in the region, most importantly in the framework of corresponding government programs that allow for federal support.

2. Objects of the mechanism - objects of the accumulated environmental damage defined by the Russian legislation. In the Rostov region such objects are mainly closed coal mining territories that were exposed to the negative consequences of coal extraction. Such negative consequences, that allow considering the problem of such territories in the context of “inter-generation ecological externalities” that hinder sustainable development of the Rostov region (Ponomareva *et al.*, 2014). Concept of

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sustainable development, inter-generation externalities and accumulated ecological damage: interconnection of definitions and phenomena), include highly mineral waters in the mines; formation of mineral water products that are formed in the basement of material moulboards (terrikons and other piling areas of coal); dead air (not suitable for breathing, extremely dangerous) in the populated areas; formation of subsistence as a result of water and alkaline erosion of rocks; formation of dangerous areas of downfall, local unsanctioned utilization of mine working (high risk to life); release of toxic chemicals into the surrounding environment and etc. (Ecological news of Don).

Furthermore, small rivers are also considered as objects of accumulated damage in the Rostov area. These small rivers were used for economic activity in the past, which was extremely destructive for the ecosystem (can no longer be utilized). The most striking example is river Temernik that flows through Rostov-on-Don.

3. Subjects of the mechanism - all the parties interested in reducing or eliminating the consequences of accumulated environmental damage: population, enterprises, regional and municipal authorities, as well as federal authorities in the framework of specified government programs and prioritized project to liquidate the accumulated damage, scientific and educational structures, noncommercial organization including ecological organizations and others.

Investors and enterprises, as well as regional authorities are considered to be the parties that exhibit the greatest interest to the formation of such mechanism. Investors in the Rostov region are faced with a whole range of problems, resulting from the territory being poorly equipped with manufacturing, communal, transport, logistical and social infrastructure, as well as broadband connection. Given this and according to the evaluation conducted by specialists, despite positive growth levels and optimistic socio-economic situation in the Rostov region, there is anxiety regarding the long-run provision of sustainable growth (no less than Russia's average and similar to other region with similar macroeconomic structure) (Shekhovtsov and Abdulaev, 2016) the judgment is that more active policy for attracting external investment is required. At the moment, the region is equipped with promising investment platforms, however a major part of them requires mass work to create suitable infrastructure. As a result, despite the highly attractive investment opportunities of the Rostov region, the above-mentioned situation limits the possibility to implement large scale investment projects. The solution of the problem of territories with accumulated damage, will allow to strengthen the regional positions regarding expanding the volume of investment, as this territories will be economically reactivated. This will also allow for improvement of effectiveness in municipal property management as theoretically the objects of accumulated ecological damage are regarded as municipal property.

4. Instruments of influence. The most effective instrument of influence of regional authorities upon the economical objects is financial support for projects to eliminate

the consequences of accumulated ecological damage. As previously mentioned, there were rules formed at federal level, regarding the provision of subsidies to the subjects of the Russian Federation to finance regional projects to eliminate the accumulated environmental damage. One of the criteria in the process of obtaining the subsidy is compulsory co-financing of the project from the side of the subject of the RF. Necessary expertise and research to determine the social and ecological impact from the activity is also required.

Given this, effective functioning of the mechanism to eliminate accumulated damage in the Rostov region requires:

- complex research and ecological expertise of coal mining territories as the objects of accumulated environmental damage;
- inclusion of ex coal territories into the government register of objects of accumulated environmental damage
- formation of methodological basis to calculate the volume of required investment for the projects to eliminate accumulated environmental damage in the Rostov region, and also inclusion of the necessary corrections into the legal requirements for the investment process;
- organization of contested projects for the inclusion into the «Clean Country» project.

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