Environmental impact analysis as a tool for state regulation of economic activity

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Relevance. The transition to a model of sustainable development requires an increase in the effectiveness of state regulation of environmental management, which in turn implies the use of effective regulatory tools, including a set of administrative and economic tools. Under the conditions of an oncoming environmental crisis and degradation, environmental impact analysis (EIA) becomes increasingly important, the purpose of which is to make environmentally sound decisions by evaluating the forecasted impacts and justifying measures to reduce or prevent them.

Purpose of the study. Analysis and systematization of institutional support for EIA, identification of evolutionary changes in relation to environmental assessment, its importance, the order of implementation, the existing shortcomings.

Results. While the study, the stages of institutional support for EIA in Russia were identified and the expediency of distinguishing four stages was justified. At the first stage, it is, actually, not about the assessment, but about the intentions of its setting. At the second stage, separate principles of environmental regulation are implemented when planning business activities. Ecological appraisal (EA) becomes compulsory. The second stage is considered as preparatory one for development and approval of laws regarding EIA. At the third stage, the legislative recognition of EIA is carried out (1994, 2000): the Federal Law “On Ecological appraisal” is adopted. A new edition of the Federal Law “On Environmental Protection” now has the Article 32 called “Conducting the environmental impact analysis”. The fourth stage (now in force) is a change in attitude towards the objects of ecological appraisal which takes place due to amendments in the Urban Planning Code of the Russian Federation. The implementation of provisions is differentiated with the project. At the same time, the list of facilities requiring EA is significantly reduced, which is absolutely illogical in the current situation of an impending ecological crisis.

Conclusions. The staging of evolutionary changes in the institutional support for EIA makes it possible to solve the problem of its improvement most reasonably in the presence of “bottlenecks” identified in the research process.

Keywords: State regulation, tools, EIA, changes, stages, improvement.

Introduction

State regulation of economy, according to the author [1], is “the system of measures and activities of the state for sustainable functioning and development of the country’s economy in compliance of the socio-economic and other goals approved by society”. In contrast to management, it slightly affects a regulated object in order to maintain the direction of development and suppress negative situations that hinder the normal course of processes. The state regulation of environmental management fits into the framework of state regulation of economy having ecological-economic systems as regulated objects with a multi-target development of economic and environmental subsystems [2, 3]. Hence, the decisions that are made under the influence of regulations introduced by the state require consideration of the laws governing the development of the biosphere.

The tasks solved in the process of environmental management include:
- implementation of measures for rehabilitation of natural resources and environmental protection;
- formation of legal support for environmental management [4];
- stabilization of ecological situation and preventing its deterioration, etc. [5, 6].

Regulatory instruments play an important role in solving the tasks set for the state regulation of environmental management; they include administrative and economic instruments [7]. The choice of certain instruments based on the most appropriate correlation of administrative and economic ones remains debated, although the effectiveness of government regulation largely depends on them. Nowadays, administrative instruments are of high-priority, including EIA – environmental impact analysis. EIA is defined as “a process that facilitates the adoption of an environmentally oriented management decision on the implementation of the designed economic and other activities by identifying possible adverse impacts, assessing environmental impacts, taking public opinion into consideration, developing measures to reduce and prevent impacts” (Regulations about the evaluation of the impact of the designed economic and other activities on the environment in the Russian Federation: they are approved by order of the State Committee for Environmental Protection of Russia dated 05.16.2000, No. 372.). The effectiveness of EIA is largely determined by the presence of appropriate legal support, its completeness and timeliness of improvement [8].

Results

The emergence of EIA in Russia is associated with 1985 when the country began to revise some regulatory and technical documentation while connecting the design with requirements of environmental protection. Particularly, in the designed system, the interaction between systems was considered in addition to the links of nature and technology (as well as the impact of the pro-
They were approved by the State Environmental Expert Administration and characterized the content of information.

Five stages of EIA: development of the concept of the planned activity; determination of environmental impacts; environmental protection and rational use of natural resources. The methodology involved a four-stage assessment work: evaluation of environmentally acceptable construction of new enterprises and facilities and reconstruction of existing ones, economic justification of projects, minimization of impact of the designed object on the environment, determination of the comparative environmental and economic effect of capital investments on the construction of new production facilities and reconstruction of existing ones. It acted though as temporarily agreed with the State Planning Committee of the Republic within the territory of Ukraine until 1982 and was canceled due to cumbersome nature of the necessary calculations. This method can be considered as an attempt of preventing management of environmental effects, which, after appropriate revision, could be recommended for practical use.

In December, 1987, the State expert appraisal board of drafts and estimates of the State Committee for Construction of the USSR prepared and approved “Handbook on drawing up a section (working draft). Environmental Protection” for SNIP 1.02.01–85, which specified and developed some basic provisions and requirements for protection of environment components and contained the necessary reference material. The following questions were subject to detailed consideration: protection of the atmosphere from pollution, protection of water resources from pollution and depletion and recultivation of disturbed lands. The manual confirmed the requirement to assess the initial state of the environment prior to construction of the designed object, to identify production factors that have a negative impact on the environment, to develop measures aimed at reducing the anthropogenic impact, and to predict possible changes in adjacent areas. However, there was no authoritative document regulating the procedure for environmental impact analysis. The temporary regulations about conducting EIA when the development of technical and economic feasibility (calculations) and projects for construction of national economic facilities and complexes first appeared in May 1990. Due to its temporary nature, its validity period was limited to 01.01.1992. In 1988, the State ecological appraisal began to function in the country, which corresponds with the formation of the National Committee of the USSR on nature conservation, a number of similar territorial divisions, as well as issuing the Decree of the Central Committee of the Communist Party of the USSR and the Council of Ministers (January, 1988) called “On the major reconstruction in the sphere of nature conservation in the country”, which entrusted the State Committee for Nature Protection on conducting state ecological appraisal. For this purpose, a new subdivision was created (State Environmental Expert Administration). The Section 5 called “State environmental appraisal” was singled out in the Federal Law “On Environmental Protection” (1991), which implied the evaluation of consequences, but this type of activity was not disclosed in the Federal Law. The EIA procedure continued to be regulated by the State Environmental Committee based on the subordinate law.

Later (upon termination of temporary regulations), Y. L. Maksimenko, I. D. Gorkina have prepared the Manual on environmental impact analysis (EIA) when development of technical and economic feasibility of investments and projects in construction of national economic facilities and complexes. Unlike Regulations, the manual gives the detailed description of each of the five stages of EIA: development of the concept of the planned activity; determination of environmental impacts; environmental impact identification; project adjustment; preparation of a statement about environmental consequences.

That same year, “Temporary rules for the environmental justification of economic activities in project documentation” were introduced. They were approved by the State Environmental Expert Administration and characterized the content of information provided for environmental appraisal. These temporary rules just mentioned EIA. The resolution on the State environmental appraisal adopted by the Council of Ministers in September 1993, did not have even a mention about EIA. According to the authors, some assumptions for the regulatory activity of EIA are as follows:

- increasing the anthropogenic environmental impact due to the growing demand for natural resources;
- awareness of hazard consequences that are formed under the influence of the changed natural environment among recipients who perceive the effects, primarily among the population;
- presence of the tried and tested way for appraisal of construction projects, preventing the implementation of design solutions without a positive expert opinion;
- involvement of environmentalists in the panel of experts for preparation of decisions concerning large projects;
- legislative regulation of the environmental appraisal, creation of a special subdivision within the Government office for nature preservation (State Environmental Expert Administration) for conducting the appraisal;
- domestic experience in carrying out EIA due to performance of such studies (fragmentarily) by teams of research organizations based on contracts entered with customers.

The draft for “Regulation on the environmental impact analysis in the Russian Federation” was developed in the spring of 1994; then it was approved in a revised form by the Order of the Ministry of Natural Resources of the Russian Federation in June 1994; then it was approved in a revised form by the Order of the Ministry of Natural Resources of the Russian Federation in June 1994.

1SNIP 1.02.01–85. Regulations on the composition, procedure for the development, coordination and approval of design specifications and estimates for construction of enterprises, buildings and facilities. URL: http://docs.cntd.ru/document/120032620
2Handbook for preparation of the section of the project called “Environmental protection.” Moscow, 1987. 186 p.
3Temporary regulations on the way of conducting the environmental impact analysis when the development of technical and economic feasibility (calculations) of investments in construction of national economic facilities and complexes: approved by first deputy Chairman of the USSR State Committee dated 05.18.1990. Moscow, 6 p.
4Temporary regulations on the environmental justification of economic activities in pre-project and design documents dated 08.1.1992. URL: http://gost.donses.ru/Index1/2/2622.htm
of the same year. The Regulation contained the scope of EIA, requirements for the content of EIA activity; it disclosed the obligations of the participants relatively EIA, the procedure for holding public hearings and liability for offenses. The Regulation was accompanied by a list of types and objects of economic and other activities. While preparation of justifying documentation for the construction EIA is carried out on a mandatory basis. The procedure for making an EIA decision for objects excluded from that list is not clearly defined. In contrast to the Temporary Regulations (1990), the information from the Regulation is more concise regarding the content of EIA. It is worth noting the lack of the EIA methodology as a drawback. At the same time, the Regulation specifies the applicable scope of EIA and the nature of public hearings. Initially, EIA is defined as a process of forecasting impacts and consequences of a project or an operating facility, or as a process of consideration the environmental requirements of the Russian Federation when preparing and making decisions about the socio-economic development of society.

The year 1995 turns out to be fruitful for legislative instruments and subordinate laws in the sphere of State ecological appraisal. In November 1995, the Federal Law “On ecological appraisal” came into effect, which (with several amendments from 1998, 2004, 2005, 2006, etc.) is still in force being the main legislative act in terms of ecological appraisal. Article 14 of the Federal Law, when determining the procedure for conducting the State ecological appraisal, indicates that the documentation to be examined should include materials for the environmental impact analysis of economic and other activities, but the Federal Law does not contain any requirements for preparation of these materials or the procedure for this analysis. Further, a few subordinate laws were adopted:

- Regulation on the State appraisal procedure (1996);
- Regulation on the environmental justification of economic and other activities (1995);
- Rules of the State ecological appraisal (1997);
- The list of regulatory documents for the State ecological appraisal, as well as for preparation of environmental justification of economic and other activities (1997).

While the development of the Regulation “On EIA in the Russian Federation”, several methodological provisions (guidelines), manuals, instructions at the sectorial level were developed, each of which covered the specifics of environmental impacts caused by peculiarities of technological processes. Two documents issued by the Ministry of Construction in 1995 are noteworthy: SP 11-101–95 “Procedure for the development, coordination, approval and composition of the rationale for investment in construction of enterprises, buildings and facilities” and SNiP 11-01–95 “Regulation on the procedure for the development, coordination, approval and composition of project documentation for construction of enterprises, buildings and facilities”. The first of them defines the requirements for justification of investments and the need for the section “Environmental impact analysis” together with the pre-project documentation – a feasibility study or a working draft. There are no specific requirements for preparation of the section in the document, since it is assumed that they should be determined by regulatory documents of the State Ecology Committee. SNiP 11-01–95 contains requirements for project documentation, which should include the “Environmental Protection” section. In 1998, the Guide for the development of the “Environmental impact analysis” section was prepared for SP 11-101–95. Then, in 2000, the Handbook for preparation of the section called “Environmental protection” for the Regulation on the procedure of development, coordination, approval and composition of project documentation for construction of enterprises, buildings and facilities, SNIP 11-01–95, appeared.

In 2000, in order to establish uniform rules for the appraisal in the Russian Federation and to determine the main provisions of EIA, the Government office for nature preservation of the Russian Federation approved the Regulation on the Environmental impact analysis of planned economic and other activities in the Russian Federation. The Regulation is more detailed document than the previous one. It covers some fundamental principles of EIA, discloses the content of stages of EIA; a great attention is paid to information and public participation in the EIA process. The final confirmation of the significance of EIA was the introduction of Article 32 into the new Federal Law “On Environmental Protection”. Along with the legislative requirement for ecological appraisal (Article 33), the procedure for which was determined by the Federal Law “On ecological appraisal,” Chapter VI of the Federal Law “On Environmental Protection” implies the requirement for EIA, materials for which should be established by federal executive authorities in the field of environmental management.

In the Regulation, the definition of EIA is given from the standpoint of a process that facilitates the adoption of an environmentally oriented management decision. The same aspect is expressed in the Federal Law “On Environmental Protection” and subsequent works [14 et al.]. Supporting the authors’ point of view regarding the consideration of EIA from the position of the possibility of justifying environmentally oriented solutions, it should be noted that there is no need for economic evaluation of consequences in the EIA description, i.e., ensuring a balance between environmental and economic targets. Hence, the author’s definition of EIA is a process that contributes to making environmentally oriented decisions in the design, planning, approval and implementation of economic and other activities by identifying possible adverse environmental impacts, assessing all types of impacts and economic evaluation of the latter, consideration of public opinion and preventing impacts.

In 2006–2008, there were changes in the Town Planning Code of the Russian Federation (GKF of the Russian Federation) and in some legislative acts, including the Federal Law “On ecological appraisal”, the Federal Law “On Environmental Protection”. According to a new edition of the Civil Code, the composition of the project documentation was changed: instead of the section “Environmental Protection”, the section “List of Environmental Protection Measures” was included, and thus the project was distinguished from substantiation package. All substantiation materials were moved to the pre-project stage, including environmental substantiation. According to the new version of the GKF of the Russian Federation, a project should have only those
documents that are necessary for construction and control (allowing to monitor the construction progress), as well as for the environmentally sound operation of the construction object. In contrast to the legislative requirements that were in force earlier, the provision of pre-project documentation (feasibility study, investment justification, etc.) and EIA based on the results of pre-project development for EA is no longer required. A customer may determine completeness and need of pre-project developments.

The project phase is regulated by law quite clearly. The project phase involves implementation of in-depth studies, including that on environmental issues. If EIA is not completed at the pre-project phase, it continues during planning stage with the help of engineering and environmental surveys, engineering-geological and geotechnical studies. The results of EIA are included in the “List of Environmental Protection Measures” section. If necessary (in accordance with Article 11 of the Federal Law “On ecological appraisal”, the materials should be submitted for ecological appraisal), they are sent for ecological appraisal. In all other cases, the EIA materials as part of the project documentation are provided for the government expert review.

The authors, based on systematization and analysis of regulatory documents, as well as experience in the regulation of EIA and EA procedures, have identified the evolution of environmental assessment in Russia and justified the expediency of distinguishing four stages. In such a case, the content of three stages of environmental assessment, was disclosed by Norman Lee in [15].

The first stage (1974–1984) is characterized by the presence of certain aspects of environmental project development and ecological appraisal. During this period, a section on the protection of nature and the rational use of natural resources appears in the composition of annual national economic plans and programs. Territorial Complex Scheme of Nature Protection has been developed since 1978; the section “Environmental Protection” appears in the project documentation. All these programs, planning documents are subject to the government expert review and construction is not allowed without a positive decision. Sometimes environmentalists are invited to the expert group to conduct EA in the case of implementation of large projects by them. In fact, this is not about evaluation, but about intentions for its implementation.

A distinctive feature of the second stage (1985–1994) is the introduction of some principles of environmental regulation in the planning of economic activities in accordance with SNiP 1-02–85 and the development of first guidance and advisory materials on EIA, as well as the adoption of government decrees and decrees on the need for energy efficiency and the creation of the State Environmental Expert Administration. The Federal Law “On Environmental Protection” confirmed EA as a mandatory activity. The second stage can be considered as preparatory for the development and approval of relevant laws, which cover changes in the composition of project documentation, the procedure for carrying out EIA and EA that leads to a weakening of environmental factor in the project development.

The third stage (1994–2003) is distinguished by legislative recognition of EIA and EA. In 1994, the regulation on EIA in the Russian Federation was approved; in 2000 – it was amended and considered the fundamental recommendations of SP 11–101–95. In 1995, the Federal Law “On ecological appraisal” and some subordinate laws were adopted, including the Regulation on the environmental justification of economic and other activities (1995). The new edition of the Federal Law “On Environmental Protection” (2002), along with the mandatory nature of energy efficiency, pays attention to EIA (a specific article 32 “Conducting the environmental impact analysis” appeared in Chapter VI of the Federal Law).

The fourth stage covers the period from 2004 to the present and is characterized by a change in attitude towards the composition of project documentation for the objects of ecological appraisal. Amendments were introduced to the Town Planning Code of the Russian Federation and, accordingly, to several legislative acts. The implementation of provisions was differentiated with the project. For pre-project materials, including EIA, a decision about a positive ecological appraisal is not required to obtain. The list of project materials sent for EA is significantly shortened compared to the previous one; it indicates an inexplicable change in attitude towards EA, which is illogical in the context of an impending ecological crisis and recognition of the need to move to a new development model. This situation remains debated. A customer reserves the right to determine the completeness of pre-project studies. The project documentation focuses on the development of measures to protect the environment.

Currently, there are a lot of recommendations and manuals on EA for various types of activities. At the same time there are no new regulations governing the composition, content and scope of pre-project developments (SP 11–101–95 and SNiP 11–01–95 are still in use). The Federal Law on EIA is still not prepared; the regulation of ecological appraisal has just legislatively executed.

Conclusions

The analysis of legal support of regulation presented by the environmental impact analysis, made it possible to systematize the analyzed information and to identify four stages in the evolution of environmental assessment in Russia. Changes in attitudes towards EIA and ecological appraisal are established, the completeness of legal documents that ensure the effectiveness of EIA are identified, the existing shortcomings are revealed. It is necessary to expand the list of project materials sent for EA, which was unfairly shortened, as well as the adoption of the Federal Law “On environmental impact analysis” (that is, legalization of the EIA regulation). In confirmation of the significance of EIA, we should mention that in the USA, EIA is carried out by federal departments (not customers), and the relevant department has responsibility for EIA and incurs financial expenses by means of taxes [16].

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Оценка воздействия на окружающую среду как инструмент государственного регулирования хозяйственной деятельности

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Актуальность. Переход на модель устойчивого развития требует повышения эффективности государственного регулирования природопользования, что в свою очередь предусматривает использование результирующего инструментария регулирования, включающего в свой состав набор административных и экономических инструментов. В условиях нынешнего экологического кризиса и ухудшения экологической ситуации все большую значимость приобретает оценка воздействия на окружающую среду (ОВОС), целью которой является принятие экологически обоснованных решений благодаря выполнению оценки прогнозируемых воздействий и обоснованию мер по их снижению или предупреждению.

Цель исследования. Анализ и систематизация институционального обеспечения ОВОС, выявление эволюционных изменений в отношении экологической оценки, ее значимости, порядка проведения, имеющихся недостатков.

Результаты. В процессе исследований выделена значительная институционального обеспечения ОВОС в России и обоснована целесообразность выделения четырех этапов. На первом этапе еще нет фактически об оценке, а о намерениях ее постановки. На втором этапе реализуются отдельные принципы экологического регулирования при планировании хозяйственной деятельности. Обязательный характер приобретает экологическая экспертиза (ЭЭ). Второй этап рассматривается как подготовительный для разработки и утверждения законов относительно ОВОС. На третьем этапе осуществляется законодательное признание ОВОС (1994, 2000 гг.), принят ФЗ «Об экологической экспертизе». В новой редакции ФЗ «Об охране окружающей среды» появилась статья 32 «Проведение оценки воздействия на окружающую среду». Четвертый этап, продолжающийся и в настоящее время, отличается изменением соотношения между ОВОС, имеющее место в силу поправок в Градостроительный кодекс РФ. Выполнение обоснований разграничивается с проектом. При этом перечень объектов, требующих проведения ЭЭ, существенно уменьшается, что абсолютно нелогично в современной ситуации надвигающегося экологического кризиса.

Выводы. Эталонность эволюционных изменений институционального обеспечения ОВОС позволяет наиболее обоснованно решать проблему его совершенствования при наличии выявленных в процессе исследования «узких мест».

Ключевые слова: государственное регулирование, инструментарий, ОВОС, изменения, этапность, совершенствование.

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