

Innovative And Environmental Aspects Of State Regulation Of Environmental Management



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Abstract: *The development of agriculture over the past 100 years has often led and leads to a deterioration of the natural environment, and intensive nature management turns into the destruction of nature, the fundamental basis for the development of agricultural economics. Powerful tractors, multi-tonnage harvesting and transport vehicles compact the soil, as a result of which it loses its natural fertility. Plowing the soil, aiming at moving the seeds of weed plants into the deep layers to weaken their competition with the seeds of cultivated plants, planted relatively close to the field surface, often leads to easy deflection of the upper layer, dust storms. In the United States and Canada, this phenomenon was observed in the mid 30s. last century, in other countries - in the middle of the twentieth century. In Russia, dust storms occurred in the 60s. after plowing virgin and fallow lands.*

Keywords: *environmental aspects, innovation aspects, government regulation, development, environmental management.*

I. INTRODUCTION

Technical progress that penetrated the agrarian sector, on the one hand, increased crop yields and animal productivity, and on the other, led to a reduction in the biodiversity of the natural environment and disruption of its ecological balance. Increasingly, experts began to note the massive suppression and destruction of the mechanisms and structures of self-regulation of ecosystems and agricultural landscapes, registering cases of their dangerous contamination with

pesticides, heavy metals, and other substances harmful to human health and other living organisms.

Concerned by these problems, scientists, public and political figures from different countries have initiated international congresses, congresses, large forums, presenting the results of new research and forecasts of environmental development while maintaining the trends that emerged in the second half of the 20th century. This movement was called the "green revolution" (like scientific technical revolution in the global economy).

II. METHODOLOGY

One of the likely scenarios for the development of environmental management was reviewed and communicated to the governments of the world by members of the Club of Rome who first gathered at their major international congress in 1983. The forecast developed by the Club of Rome said that while maintaining the negative trends in environmental management that had taken shape by the last third of the 20th century, by 2025, a crisis state that is destructive for the planet may arise. The population of the globe will increase at the prevailing pace, and the planet's natural resources, on the contrary, will decrease to a level that is 8–10 times less than at the beginning of the century. This will lead to significant negative consequences for humanity, including: soil erosion, desertification, salinization and waterlogging; violation of the hydrological regime, reduction of water protection areas; exceeding the maximum permissible rates of chemicalization of agriculture; enhancing the effects of "pesticide boomerang" and "evolutionary dance" in the host – parasite system; increase the dependence of agricultural landscapes from the use of man-made means (Vasilev et al., 2018, Akhmadeev et al., 2016; Korableva et al., 2018; Kuznetsova et al., 2018; Goloshchapova et al., 2018). In addition, to an increase in the genetic and ecological vulnerability of agricultural landscapes, to an increase in the tendencies toward debiologization of intensification processes; agrolandscape loss of biodiversity and aesthetic properties (Akhmetshin et al., 2018; Avkopashvili, 2019; Ganieva, 2017; Melnikov, 2018; Mullakhmetov et al., 2015).

An adaptive environmental management strategy based on agro-ecological zoning of agricultural areas is needed. About this, at the end of the nineteenth century, the outstanding Russian soil scientist V.V. Dokuchaev. He emphasized that agriculture should be strictly adapted (in his terminology - timed) to the specific soil and climatic features of the territory.

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A large number of scientific works are devoted to the problems of heterogeneity of agricultural areas and the need to take this factor into account when developing programs for the scientific and technological development of agro-industrial production. Principles of adaptive zoning of agricultural areas (Fig. 1).

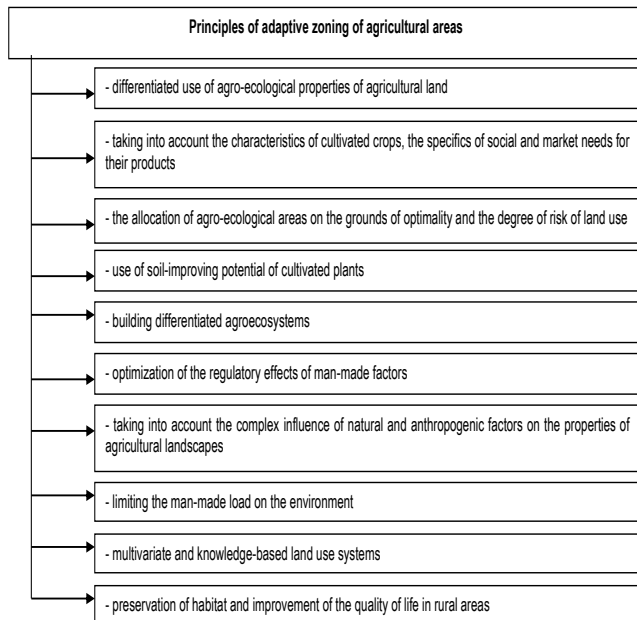


Fig. 1. Principles of adaptive zoning of agricultural areas

When developing programs of innovative scientific and technological development of the agrarian economy of the country and its regions (Korableva et al., 2019), it is necessary to comprehensively take into account not only the natural, ecological and territorial characteristics of each agricultural zone and even microzones, but also the sectoral features of an extensive national economic complex, united by the notion of “agro-industrial production”. The structure of the agro-industrial complex includes not only the production of agricultural products, but also their processing into ready-to-eat foods, as well as intermediate products for light industry (Bulkhairova et al., 2019; Miloradov et al., 2019; Krotkova et al., 2016; Kolmakov et al., 2019; Yemelyanov et al., 2019; Movchan and Yakovleva, 2019). A significant share in the total agricultural production is accounted for by grain. Next in terms of production is the production of industrial crops. Large volumes of products are characteristic of forage, vegetable and melon crops. Breeding of dairy and beef (meat and dairy) cattle, pigs, sheep, goats belongs to the main sub-sectors of animal husbandry in the country. The structure of the poultry industry includes the cultivation of chickens for meat and for the production of eggs, the cultivation of ducks, geese, turkeys, guinea fowls, etc (Ivanova, 2018; Melnikov, 2018; Scialabba, 2010; Puryaev et al., 2019; Gradoboev and Tesleva, 2017; Nagimov et al., 2018; Grakhova et al., 2019; Kashirskaya et al., 2019; Nefedov et al., 2019).

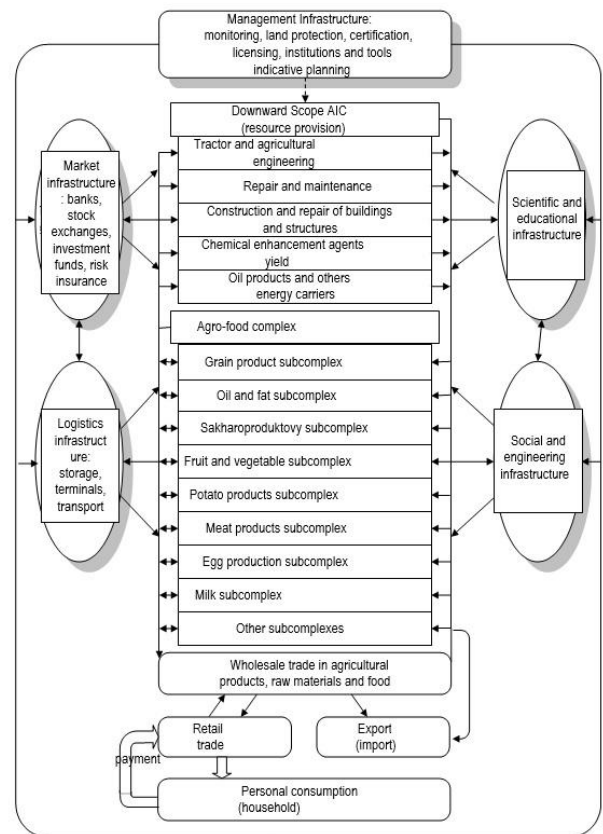


Fig. 2. Composition of food subcomplexes of the agro-industrial complex of Russia

Innovation activity in the agrarian economy should be developed for each type of product. Each type of agricultural products, raw materials and food needs scientific and technological support, focused on improving quality, reducing costs, creating new consumer-friendly products. Innovative processes in modern agro-industrial production encompass not only agricultural production, but also the entire multi-link process, culminating in the processing of agricultural products into final food ready for consumption, bringing it through the wholesale and then retail to mass consumers (Dunets et al., 2019; Kireev et al., 2019; Gabidullina et al., 2019; Voronkova et al., 2019; Fedulova et al., 2019). This happens on the basis of cooperation and integration relations between producers of agricultural products, their processors and trading enterprises. The production, procurement, storage, processing and sale of finished products of the agro-industrial production are more and more often connected into food subcomplexes. Their combination is called the agri-food sector (Fig. 2).

An equally important role in the system of measures to regulate the economy of the agro-industrial complex is environmental regulation, since its formation is an integral part of the country's agrarian policy. State regulation of environmental protection provides for measures to protect nature, as well as enterprises for the implementation of mandatory environmental protection measures (Mohd Tahir and Mohd Salleh, 2018; Salimova and Sabitova, 2019).

The state develops special environmental protection programs for

the restoration and protection of the environment, establishes the amount of funding for the implementation of these programs. The need for state regulation in the field of environmental protection is associated with the exacerbation of the problem of environmental safety. The acuteness and the need to solve environmental problems that are increasingly becoming global in nature are realized in almost all countries (Goryushkina et al., 2019; Tarman, 2018; Mullins, 2019; Arribas et al., 2019; Prodanova et al., 2019; Shatunova et al., 2019). In economically developed countries, central authorities have emerged that conduct environmental policy on a national scale. The legislative development in the field of environmental protection has been rapidly developed. In economically developed countries, laws and acts have been adopted that regulate norms and procedures for the use of natural resources, and methodological recommendations have been developed that declare environmental principles. They secured the role of the state in the regulation of environmental activities, defined the rights and obligations of nature users (Dagaev et al., 2019; Trofimova et al., 2019).

The need for state regulation in the field of environmental protection is also due to the fact that it is impossible to solve this problem only through purely market mechanisms. The market system is effective in the use and distribution of resources that have a monetary value, but it fails in the use of resources with a lower price or free resources, which include natural resources. This is due to the difficulties of quantifying externalities.

III. RESULTS

The inefficiency of the market mechanism, the so-called “failures” of the market in the field of environmental protection and environmental management, necessitates state regulation of these processes. At the same time, the goal of state regulation in the field of environmental protection is the transition to sustainable development, ensuring a balanced solution of social and economic problems, problems of preserving a favorable environment and natural resource potential (Shumakova, 2016; The Future We Want, 2012; Silalahi and Yuwono, 2018; Saenko et al., 2019).

The peculiarity of the system of state regulation of environmental activities is the presence of several levels of regulation: national, regional and local. In recent years, there has been a tendency to increase the number of government bodies, including sectoral ministries responsible for the state of the environment in their area, and to expand their functions in this area (Shaytura et al., 2018; Paptsov and Nechaev, 2019). In Russia, a unified state policy in the field of environmental protection and environmental management is carried out by the Ministry of Natural Resources and Environment of the Russian Federation (the Ministry of Natural Resources of Russia), which performs coordination functions, develops and publishes relevant regulatory legal acts and controls their implementation (Frolova et al., 2019; Voronkova, et al., 2019; Magsumov, 2019a,b).

Recently, a system of administrative and market mechanisms has emerged in the field of environmental

protection (the so-called “mixed mechanism”). There are over 80 different economic instruments in the world in this area, including environmental monitoring, environmental management, financing and environmental incentives. Russia is one of the first countries in the world to put into practice payments for environmental pollution. They should compensate for the economic damage caused by enterprises to the natural environment in the course of their activities. In accordance with this, payments perform two functions: first, they stimulate enterprises to reduce emissions of harmful substances, and second, they contribute to the subsequent accumulation of funds intended to eliminate the negative environmental consequences of production. There are three types of payments: payments for air pollution, discharge of pollutants into water bodies and waste disposal. In addition, environmental and administrative taxes play an important role in market conditions; subsidies; deposit return system; formation of the emission market; forced incentives.

IV. DISCUSSION

For the implementation of the most important environmental objectives of strategic importance, the development and implementation of environmental programs play an important role. The program is a set of measures coordinated in terms of resources, performers and deadlines aimed at the effective solution of environmental problems (Sycheva et al., 2019; Titova et al., 2019; Voronkova et al., 2019; Vasilev, 2019; Vasilev and Tung, 2019). Depending on the purpose of their implementation of the program is possible at the international level, within a single country, at the regional level. In many countries, integrated environmental management programs have been adopted throughout the natural product chain and in all environments, supported by appropriate diversified legislation (Dibrova, 2018; Sokolova, 2007; Sokolova, 2010; Sari et al., 2019; Olaniyi, 2019; Bohdaniuk et al., 2019). In the implementation of programs, the state usually plays the leading role, since the need for rapid concentration of significant resources, the complexity of the problem and the uncertainty of economic efficiency make direct regulation expedient with the supporting role of market-based instruments (Ponomareva et al., 2019; Ivanova, et al., 2019; Plaskova et al., 2017). In Russia, federal targeted programs are necessary for the rehabilitation of ecological disaster zones, the protection of especially valuable natural objects (Lake Baikal, river systems, sea basins), and the fulfillment of international obligations (protection of the ozone layer, greenhouse gases, biodiversity conservation).

V. CONCLUSION

The global nature of environmental problems, aggravated in modern conditions, involves joint efforts of different countries to solve them. State participation in international cooperation on environmental protection (the signing and implementation of bilateral and multilateral agreements and programs, participation in the work of international organizations) allows us to influence the development of common principles,

mechanisms and tools regulating and regulating environmental management on an international scale.

It should also be noted that environmental approaches to the organization of production management are necessary. The main task of greening management should be the creation of a management system that, on the one hand, reduces the impact of production technologies on the environment, and on the other, increases production efficiency, that is, there is a need for environmental management that can be developed on the basis of environmental entrepreneurship. One of the effective directions of its development can be the organization of the ecological production of domestic high-quality products, solving the problems of the country's food security.

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