Stages of Ecological Policy Development in the Industrial Sector of Russia in the Second Half of the XXth Century: Historical Perspective

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Abstract: The article is designed to bring out evolution stages of the state ecological policy concerning industrial perspectives in the second half of the XXth century with the view to uncover the features of state bodies' nature-oriented activity in the industrial sector of Russian economy. The approach applied for the research of the given issue allows to analyze the industrial growth of the country from a totally new level; to observe the course, character and peculiarities of its impact on the ecological degradation that determines the critical condition of the environment at the present stage. Three main stages of ecological policy development in the industrial sector of Russian economy in the second half of the XXth century are presented in the article: the first stage (1950-1960s) is characterized by rational environment utilization the main goal of which was the reservation of exhaustible resources (flora and fauna, soil etc.) and economical consumption of non-renewable resources (mineral wealth). The second stage (1970-1980s) was supposed to introduce resource-conserving and nature-oriented programs, international cooperation that aimed to solve ecological issues. The third stage (the end of 1980s – 1990s) was characterized by the formation and implementation of ecological policy in the conditions of economic activity and reorganization of economic mechanism. The results of the research may facilitate the efficient usage of economic, legal, technological, moral and organizational methods aimed to influence the developing economic system, its highest ecologization.
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1. Introduction

The global character of the ecological crisis that is posing an urgent threat to the further humankind development has put forward the necessity to study the origin and evolution of contradictions in the system "human-nature" as a priority scientific task. The significance of such issue is explained by crucial changes in the development of modern civilization which is characterized by disproportionate growth of the world population, increase of energy, resources, and food consumption that caused massive environmental pollution and negatively reflected on humans' life conditions – clean soil, water, air; food supply security. All these factors constitute an increasing threat for human cultures security approaching the culminating point inevitably, the proximity to which is determined only by the fact that how long the society will be able to hold on in the degrading and exhausted environment.

The significance of the studied problem is also proved by the fact that ecology along with economy and international relationships makes the three major problems of modern Russian society development. The inclusion of the Russian Federation in the global civilizational process that is oriented towards the model of sustainable development, defines the necessity to choose the strategy of social-economic growth that combines reasonable progress and minimizing damage to the environment.

Due to the integrity of the problem and deep inner interconnection of all the components and phenomena, the solution of this problem should be undertaken by representatives of different scientific spheres, the key role should be given to history science (Tvedt, 2010). Its major task concerning the study of ecological issues is to seek new paradigms of civilizational development on the basis of the previous experience analysis what the human has obtained while interacting with nature; this will undoubtedly enrich human's ideas about possible ecological-economic contradictions (Walliss, 2012; Wikan, 2012).

Russian history of society and environment relationship is quite rich and educative. Archeological materials allow to trace the process of human activity impact on the environment up to the development of some regions ecosystems. The most attention, according to academician Makarov N.A., should be paid to the study of paleoecologic aspects of Medieval history, especially when it

concerns the widespread view for the period of XII-XIV centuries as the epoch of significant cooling and humidity that caused apparent economic, social and demographic consequences (Makarov, 1998). Academician Milov L.V. pointed out that "environment-climatic factor had an impact on the character and rate of the development of those or other social formations including tribes or nations, or whole state formations and states" (Milov, 1998). Academician Kovalchenko I.D., specifying the role and impact of the environment-geographic factor in the historical development as a complex research task, underlined the necessity of its solution by historians in collaboration with other specialists (Kovalchenko and Muravyov, 1992).

The significance of modern historical research of interconnections and mutual interactions existed in the real nature between a human and environment is confirmed by the formation of the historians of their own research segment of ecological problems along with numerous science, technical, humanitarian, and social sciences; it has been reflected not only in previously traditional historical concepts but also in the formation of a new guideline of the historical science – the History of ecology (Ravi Rajan, 1997).

The establishment of scientific societies the work of which is devoted to the problems of the environment has become the first results of historical science interaction with natural sciences within the frames of some national scientific schools: American Society for Environmental History, 1977; European Society for Environmental History, 1999); there have appeared some specialized periodicals: «Environmental History», «Environment and History»; a lot of regional and continental publications about histories of environment have come out; the development of different directions within the frames of ecological history has originated.

2. Materials and Methods

The development of ecological history as a separate part of the research sphere has defined the research objective of the given article the key idea of which is the conclusion that the analysis of human's activity aftereffect on the environment during past epochs is a crucial task of the historical science. Special researches of this direction promote the study of ecological crises of the past but as well give the opportunity to project historical knowledge about the origin and evolution of contradictions between the human and environment on the modern reality and this allows to define possible ways of ecological problems development and outline the variants of their solution.

The goal of the objective and overall study concerning Russia's ecological problems being the result of the continuing environment degradation includes the research of their regional components, namely, a historic-ecological analysis of the regions with more complicated environment characteristics. There due to the impact of human's activity, the contradictions in the system "human-nature" have reached the urgency. In this connection the process of Russia's large industrial centers development has got the most scientific interest; the typical example is the experience of Middle Volga region leading industrial establishments – the Republic of Tatarstan and Samara region. The relevance of industrial development study of the abovementioned regions in the context of ecological problems of Middle Volga region in the second half of the XXth century is proved by the formation of the powerful industrial basis tending to further enlargement and development, exacerbation of ecological situation in industrially developed Middle Volga regions on the whole; the necessity to solve local territorial problems of region industrial centers; significant ecological risks of negative consequences of anthropogenic impacts in the Volga and Kama river-basins.

3. Results

Materials of central and regional archives reveal the nature loss essence of the economic strategy characteristic for the Soviet Union: it provided a left-over principle in planning and implementation of environment arrangements. The basic indicators of natural resource management were the amount of investments into nature conservation, capacity of wastewater treatment facilities, air emissions etc. All arrangements were performed within the projects of new industrial enterprises construction which had no indicators that reflected the final social-economic result of nature protecting activity. That did not allow to evaluate the ecological-economic effectiveness of investments to the full extent. The environment protection was regarded as some additional expenditure of the society which it had to bear in connection with productive forces that in turn did not promote the optimization of natural resource management and improvement of ecological situation.

The increased attention the state paid to the environment protection problems since 1960s that was declared in legal acts, various governmental and party solutions did not result in fundamental changes of the legal system that in turn led to the expansion of ecological crisis. The formal character of adopted legal acts was originally in

their contents, they were not substantiated by the effective mechanism of their implementation the basis of which should be made of economic principles aimed at nature management.

It is quite obvious that it resulted in tensed ecological situation in many large cities and industrially developed regions of Russia by the end of the century. Tatarstan and Samara region are among them; they are major polluters of the Volga river basin; the environment pollution of it exceeds the average of the Russian Federation by 3-5 times. Statistics also testifies that Samara region produces the most amount of emissions to the atmosphere in the Volga region (36% of the total), Tatarstan Republic 22%, Volgograd region 13%. All other subjects of the region produce 15%.

Ecological problems of Middle Volga region were caused first of all by a high concentration of oil extracting, oil refinery and petrochemical industries; the region became the largest producer of some types of products. The establishment of great industrial enterprises, the most part of which appeared in the post war years, made Tatarstan and Samara region the territory of urgent ecological situation that is convincingly proved in large industrial centres – Samara, Tolyatti, Syzran, Kazan, Nizhnekamsk and other cities.

A complicated ecological situation in industrially developed regions of the country was the result of sharp disbalance between environment-ecological potential reproduction and its disproportionate consumption, pollution, and infringement of environment basic components. For many decades the social-economic development of large industrial centers of the country were under directive dependence of state strategy in the productive forces development; in many cases it was determined by industrial ministers of all-Union value. The technocratic approach domination on the territory of Middle Volga region resulted in mighty industrial zones, the technological functioning of which became the major reason of the environment quality reduction.

The analysis of industrial aspects of state ecological policy in the second half of the XXth century allowed to single out three basic stages of its evolution.

At the first stage (1950-1960s) the environmental protection strategy was oriented mostly at rational nature management the major goal of which was to safe exhaustible resources (flora and fauna, soil etc.) and economical consumption of non-renewable resources (mineral wealth). Nevertheless, as it has been shown, consumer attitude to environment that was aggravated by departmental structure and dissociation resulted in uncompensated utilization of major natural resources – water, land, natural resources; insufficient motivation to reduce discharges and emissions; disregard of ecological factors at human activity assessment, price forming, in development and productive forces location forecasts .

At the turn of 1950-1960s there appeared another tendency of environment protection policy. Approved by all-Union and republican structures, regulatory acts about natural resources marked the transition to a totally different stage of its development connected with the appearance of new regulatory documents (namely, the Law about environment protection); they were aimed at the implementation of the complex approach to the arrangement of environmental objects utilization and protection. There were adopted mutual decrees of party bodies and the Council of Ministers, decrees of the USSR Government and departmental regulatory acts. It should be emphasized, though, that positive changes were not the result of environment protection necessity but the search to replenish the raw material basis and increase the production capacity. The development of prediction concepts by the USSR Gosplan in the sphere of natural resources utilization that informed about natural resources depletion in some regions of the country may be a vivid confirmation of this tendency.

The second stage (1970-1980s) is marked by the intention to introduce resource-saving and environment protection programs, international cooperation aimed to solve ecological problems. The expansion of human activity resulted in water and air quality reduction in some regions. It promoted the awareness of environment protection significance. In the 1970s there were made attempts to implement an all-Union program to develop and introduce wasteless work cycles of industrial enterprises aimed to use the waste of one enterprise as the raw material for another one.

The situation was aggravated by the fact that the authorities, enterprises and organizations providing the implementation of the economic tasks had to monitor and be responsible for the rational use of natural resources and protection of the environment that made it possible to abuse in this sphere. Impunity of ministries and departments when they caused damage to the environment, their showy initiatives and cares about the environment, the absence of control made the central authorities disoriented in their intention to work out correct priorities of nature management. Reports of practically all Ministries about the implementation

of nature protection works contained counterfeit material about the reduction of harmful substances emission, construction of new and increase of already existing treatment facilities capacities. The contradictions of that period did not promote the fundamental change of nature management schemes.

The third stage (the end of 1980s-1990s) was the period when the development and implementation of ecological policy took place within the conditions of human activity intensification and economic mechanism reconstruction. The Resolution of the CC of CPSU of July 16, 1987 "About ecological situation in some regions and industrial centres of the country" and the Resolution of the CC of CPSU and the Council of Ministries of the USSR of January 7, 1988 "About the fundamental reconstruction of nature protection situation in the country" enjoined ministries and departments of the USSR to provide strict coordination between human activity and ecological requirements so that any adopted solution should take into consideration long-term interests of the society for the purpose to conserve and improve the environment.

The 1990s happened to be the most important period for the development of the environment protection and nature management activity legal support, working out laws and by-law acts, adjustment of nature management mechanism at the federal and regional levels. Therewith, the results of first actions showed the necessity to develop a unified strategy, introduction of real instruments to stimulate enterprises for rational complex utilization of natural resources and reduction of environment contamination level.

The characteristics of the major stages of ecological policy development in the industrial sector of the country in the second half of the XXth century make it possible to conclude that the transition from planning directive methods to the system of economic measures aimed at the environment protection and rational nature management is quite a multi-faceted phenomenon the basis if which should make a consistent transition to ecologically safe industrial production that allows to minimize negative consequences of technogenic impact on the environment.

4. Discussions

The scientific interest in ecological history is more characteristic for a foreign historical school. In the last decades of the XXth century leading ecological historians such as G.C. Herrera, A.R. Main, M. Rangarajan, D. Worster, W. Cronon, B. Leibhard introduced a fundamental development of a new guideline, they defined its goal, objectives, the source base and some other significant issues (Herrera, 1997; Main, 1996; Rangarajan, 1996; Rajan, 1997; Worster, 1996 etc.).

In 2002 a wide range of publications, availability of generalizing specific researches encouraged European Society for Environmental History to undertake the first attempt to classify scientific works on ecological history (e.g. bibliography of literature that has been published since 1993 and devoted to the issues of Europe history of the environment includes 1400 publications). Seeking to expand European data base, the authors of this project started collaboration with one of the oldest USA scientific societies - Forest History Society which obtained a vast bibliography (Emanuelsson and Segerstrom, 2002; Hannam, 2000; Dovers, S.R., 2000; Lanz, 2000; Moran, 2004).

In the following years there were prepared fundamental historiographical surveys of researches on ecological history; they reflected achievements of different national and regional schools of Europe, Africa, America, China, Australia and New Zealand (Robin, 2004; Maohong, 2004; Carruthers, 2004; Coates Peter, 2004; Safiullin et al., 2014; Bankoff, G., 2013).

The significance of natural (landscape, climatic, biosphere) factors in Russia's history was shown in the works of S.M. Solovyeva, V.O. Kluchevskogo, N.Ya. Danilevskogo and other outstanding Russian scientists. Nevertheless soviet historiography followed a very hard guideline at that time – the impact of geographical and other environmental factors on the character and pace of nations and states development was regarded as the product of bourgeois science. That is why the ecological component that was revealed in the works of Russian historians of that time was vague, taking secondary or even a more distant position, and for many years there was an opinion that "… nature in its sense is understood as an ahistoric subject of cognition" (Akhutin, 1988).

It resulted in an inevitable reduction of scientists' interest in historical researches of ecological problems. Due to this fact the concept of historic-ecological range of problems, conceptual apparatus have not been developed in Russian historiography so far.

However, the objective significance of ecological problems, specifically in the last decades of the XXth century, promoted a gradual increase of works that were devoted to the research of society and environment interaction throughout human evolution. There has started the formation of the Russian school of ecological history the

representatives of which have already achieved certain success in studying various aspects of society and environment interaction (Matveev and Philipova, 1994).

5. Conclusion

Thus the experience of industrial leaders' development of Middle Volga region - the Republic of Tatarstan and Samara region – showed that in Russia's history of the second half of the XXth century it was difficult to find examples of similar regions where there were the same high rates of industrial growth and which were under close attention of party and state bodies. However the development of industries in Middle Volga region had both positive and negative consequences, and first of all it concerns the ecological and social-economic situation.

The major reasons of environment emergency conditions in the region in the second half of the XXth century are: economic strategy aimed to involve natural resources into human activity; irresponsibility and absence of control of corresponding ministries, departments, regional and local bodies; the absence of sufficient economic motivation and responsibility of enterprises and organizations to implement nature management activity; a low level of ecological culture, education and awareness of the population.

Insufficient efficiency of nature management policy of state and regional authorities in the sphere of industrial production was explained not only by the priority of production figures in combination with technical mistakes but also by undue realized opportunities of the ecological system of the soviet state. A new system of nature management that started to develop since the end of 1980s on the basis of legal and economic regulation obtained effective forms only by the end of the 1990s and that did not allow to change tendencies of ecological degradation in the country.

The result of the industrial activity has become the concentration of hundreds of chemical contaminants in Middle Volga region environment that are in a complex interrelation which either increase or decrease their impact. In these conditions it is necessary to intensify the whole nature protection system and nature utilization in general especially in the sphere of industrial ecology, nature and forest use, natural resources use, construction raw material. A complex combination of nature-anthropogenic impacts where industrial impact is the most significant and problematic serves in our opinion as a basis for forecasts about further aggravation of the ecological situation.

6. Recommendations

The results of historic-ecological research may promote efficient application of legal, technological, moral and organizational methods to influence the forming economic situation, its maximum ecologization for the purpose to balance the development of different processes: economic development of the country and establishing a favourable environment for humans'life and health.

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