

Reading professor A.S. Astakhov again

The last two decades or so – since the Brundtland Report¹ (1987, Rio de Janeiro), then the Paris Climate Agreement² under the auspices of the United Nations³ (2015, Paris), then the adoption of the UN Sustainable Development Goals (2015, New York) – have been characterized by a tremendous increase in attention to ecological topics. At first, these were simply environmental issues (respect for the environment and the need to reduce anthropogenic impact on it), then issues of the climate agenda (deterioration of the temperature regime of the living environment) and, finally, today humanity has come to the need to consider environmental (climate), economic and social processes in their close interconnection and interdependence (17 Sustainable Development Goals).

All the noted milestones are tied to one or another place where they were publicized, and none of them is associated with Russia. What is the reason why our country is not involved in raising, discussing and promoting the issues of ecology, climate agenda and sustainable development? Is it irrelevance? Probably not – all of the above-mentioned issues are very important and are highly critical on a large Russian territory.

In the gaps of knowledge and understanding of the noted problems? Here our situation is probably one of the most favorable. Russian science has always paid (and continues to do so now) great attention to the study and generalization of knowledge about the interaction between man and nature. The conceptualization of the fundamental bases of this interaction was made by our outstanding compatriot V.I. Vernadsky, who created the doctrine of biosphere (the area of life on Earth) and noosphere (the sphere of influence of human mind on natural processes)⁴. His works were in many respects logically connected with the works of a whole pleiad of prominent Russian scientists – D.I. Mendeleev, K.A. Timiryazev, V.V. Dokuchaev, E.S. Dokuchaev, and others. Dokuchaev, E.S. Fedorov, A.I. Voeikov.)

¹ Report of the World Commission on Environment and Development: Our Common Future. – Our Common Future: Report of the World Commission on Environment and Development (un.org).

² Paris Accords – Paris Agreement Russian (unfccc.int).

³ Transforming our world: the Agenda for Sustainable Development till 2030- Microsoft Word – 1516301R.docx (unctad.org).

⁴ *Mochalov I.I. Vladimir Ivanovich Vernadsky. 1863–1945. Moscow: Nauka, 1982. 488 p.*

Maybe it is the lack of understanding of practical approaches to regulating processes in the field of ecology, climate and sustainable development? However, Russia has a long history of outstanding engineers and researchers, who are “innumerable”, working on the development of practical steps and measures in the above-mentioned areas. As a vivid example, in the author’s opinion, one of the founders of the economy of mining and mineral industries, Professor A.S. Astakhov (1926–2012), can be named with good reason. Alexander Semyonovich made his way from an economist of the coal industry to a researcher and developer of practical approaches to the implementation of ecologically, climatically and socially oriented nature management.

His summarizing work⁵, based both on his research and on the practice of those projects in the creation and implementation of which he participated, describes a holistic approach to what is now called environmentally acceptable, climate-smart and sustainability-oriented socio-economic development.

In particular, he formulated “specific basic provisions of rational nature management:

- man must realize that his life can be happy only in good harmony with the natural environment;
- the system of nature management cannot be built on a purely economic basis in terms of ordinary business;
- any human impact on the natural environment does not go unanswered by it;
- nature is always the stronger partner in the man-nature game, and man is the weaker one;
- man should set reasonable goals for himself when playing with nature;
- interactions with the natural environment always take place under conditions of great uncertainty”⁶.

From the formulation of the basic provisions of nature management “suffered” on a large scientific baggage and vast practical experience, Professor A.S. Astakhov comes to the definition of approaches to their practical implementation. Thus, reasoning about the effective arrangement of the system of management of nature protection activity, he wrote that it: “...is based on two components: legal restrictive norms and economic incentives of ecologically reasonable and safe nature management”⁷.

⁵ *Astakhov A.S. Natural resources and national wealth / Reviewer Kryukov V.A. (IEOIE SB RAS). Moscow: “IAC Energia”, 2010. 220 p.*

⁶ *Ibid. P. 44.*

⁷ *Ibid. P. 49.*

Regarding the multiplicity of objectives (see, for example, 17 UN SDGs): "...the multiplicity of objectives simultaneously pursued by a large-scale project is difficult to capture in the structure of a single super-complex criterion... The value vector can be represented graphically in the form of a value tree or transformed into an integral criterion of aggregate social effect"⁸.

On the feasibility of implementing management approaches taking into account continuous changes: "...it is generally accepted to consider the general flow of time and to distinguish in its composition the past, present and future... economic evaluation of a project (for example, field development) is not a single act of decision-making, but a procedure carried out in several consecutive steps, stretched in time (sometimes for decades); ...an important role belongs to adaptation management; ...flexibility, adaptability of decisions is one of the most important, indispensable qualities of project management in nature management..."⁹.

The general conclusion reached by Professor A.S. Astakhov is that the realization of nature-saving (and, consequently, sustainable) development is determined by "...regularities of the dynamics of the formation of national wealth. The most significant of them is the accumulation of social culture. We understand it as a set of fundamental characteristics of culture in the broadest sense of the word. Culture is a quality accumulated over time..."¹⁰.

Thus, "according to Astakhov", culture in the broadest sense of the word is the basis that shapes and determines the approaches and dynamics of solving environmental, climatic and socio-economic problems from the standpoint of sustainable development.

What peculiarity of the Russian "cultural code" did not allow the above ideas and approaches of our outstanding compatriots to be put into practice and did not contribute to the consolidation of their priority both at home and abroad? It seems that two main groups of reasons prevented the priority of Russian scientists from being fixed in the international agenda:

1) the absence of any significant practical successes in the implementation of environmental, climate and sustainable development policies on the territory of the country; the relatively low priority of these issues by the country's leadership for a long time; after the change of the economic model (which itself required the diversion of energy and attention from these issues) – unreasonably high

⁸ *Astakhov A.S. Natural resources and national wealth / Reviewer Kryukov V.A. (IEOIE SB RAS). Moscow: "IAC Energia", 2010. P. 94.*

⁹ *Astakhov A.S. op. cit. op. cit. P. 94, 105, 129, 131.*

¹⁰ *Ibid. P. 5.*

expectations about the change in the behavior of new economic agents in the direction of environmentally and climate-oriented;

2) inertia of following the industrial model of development established in the USSR, which still has a huge impact on all processes in the socio-economic sphere in our country; its most important features include the desire to unify the implemented approaches and solutions in different sectors and regions of our huge and diverse country, without taking into account their specifics; lack of significant rights and powers of regions and municipalities in addressing environmental, climatic and socio-economic issues.

It is due to the latter group of reasons that the problems in the sustainable socio-economic development of regions, which are considered by the authors of the thematic selection of this issue of "ECO", have developed. They are considered on the example of gasification of Krasnoyarsk Krai (paper by A.V. Verkhoturov and A.I. Pyzhev), reduction of CO₂ emissions into the atmosphere in Zabaikalsk Krai (paper by V.S. Brezgin and N.P. Glazyrina), ensuring the effectiveness of state environmental policy measures (paper by Y.I. Pyzheva).

Our conclusion largely corresponds with a comparative assessment of the success of economic reforms in China and the former Soviet Union: "Unlike the Soviet Union, where a strong system of ministries set plans for enterprises bypassing local authorities directly, Mao's system decentralized economic and administrative powers by distributing them among local governments"¹¹.

Solving the issues of ecology, climate agenda, creating the foundations for sustainable socio-economic development of the country as a whole and its regions, municipalities in particular, is impossible outside the participation of all stakeholders – the state, business and society at all levels of the hierarchy. We are at the very initial stage of solving this key problem. The most acceptable way (according to A.S. Astakhov) is to solve it in dynamics and taking into account specific conditions and circumstances.

Editor-in-Chief of the journal,
academician of the RAS



V. A. Kryukov

¹¹ *Zhang Chun Oi*. The economic takeoff of rural China. Institutional foundations of economic reform. Boston/St. Petersburg: Bibliorossica, 2023. 383 p. [P. 148–149].