

Natural resources as an existential dilemma. Philosophy-based approach to the imperative of the epoch

Valentina Mirzaeva

Researcher,

I.Zhordania Center Studying Productive Forces and
Natural Resources of Georgia of the Georgian Technical University

There was a time not so long ago when there were many highly-skilled professionals everywhere who in addition to profound knowledge in their study areas were capable of thinking broadly that helped them in making progress in not only their field of scientific interest but social sphere as a whole. A great many highly respected people have written their names in the history of scientific and engineering thought of Georgia as well [1]. Nowadays, there is the declension of philosophical, intellectual, religious thought, a total erosion of the intellectual elite around the world, the deficiency of persons who have ability to deeply comprehend the multifaceted reality. It is peculiar to the contemporaries including domain experts to be wanting in creativity, critical reasoning and thinking broadly; most of them have a "tunnel" vision instead of the broad world-view.

The PhD degree as applied to a domain specialist has become a formality, but presently, there is a need for restoring its initial meaning for a researcher to possess a knowledge base in his field of expertise and at the same time to have a broad, philosophical vision of reality, integral analytic abilities, skill in data comparison and generalization, understanding of deep interconnections between various fields and phenomena. Just such researchers are in high demand today, their potential to be used for the development of society, human civilization as a whole [2]. The inability to philosophically comprehend different aspects of the contemporary realities, to make in-depth analysis of crucial phenomena, to see cause-effect relationship in the processes being developed, to make a predictive assessment of trends – all this has adverse effects such as the impossibility to adequately address serious challenges of the epoch including such significant ones as environmental degradation, depletion of natural resources, growing resource shortage.

Resource sphere and a totality of related problems are an essential factor of human survival and sustainable development of any country. We attempt here to briefly examine some aspects of the relationship "community-natural resources" from philosophical perspective. It seems that philosophical dimension of the issues relevant to natural resources highlights the sources of many challenges of modernity that in its turn, will help to find balanced solutions of pressing questions, to harmonize various aspects of social development.

Throughout the course of history, natural resources have been the basis of mankind subsistence, and for thousands of years, people used the resources within reasonable limits, they met their basic needs and gave the natural resources a chance of recovery, renewal of their potential in the same scope for the succeeding generations to be able to cover their survival needs. Of course, there were cases of unreasonable, irrational use of natural resources at all historical stages which, along with periodically occurring natural hazards and climatic disturbances, led to local environmental disasters, appearance of the spots of nature degradation, and some marks of those processes can still be seen on the body of the planet. In general, however, the previous epochs could be considered as periods of relatively harmonious existence of humans in the natural environment that allowed the world population to get a rather wide range of natural resources by the early 20th century most of which still had potential for recovery

The situation has begun to radically change with the rapid industrial growth that required a great deal of resources, and afterwards, under the accelerating technological advance, a man proud of his power over nature, self-confidently considered himself to be "the hub of the universe". Beneath our eye, the so called "delayed effect" of such an approach is being manifested, where avalanche-like destructive processes are developing. The irrational nature management, excessive anthropogenic impact on the environment, severe technogenic accidents have caused the

intensification of natural disasters, considerable climate change and great many other events which are sometimes mentioned as nature's "revenge" to *Homo Sapiens*. All these phenomena mean that the functioning of a complicated system "man-nature" has gotten out of balance.

Naturally, the growth of material well-being, consumption expansion causes a fast growth of the raw materials demand. Regretfully, humans have lost the ability to live in view of the scanty of natural resources, to commensurate their goals and needs with available resources. Mass consciousness is deprived of understanding of the fact that natural resources are exhaustible, that there comes a time when people should fundamentally change their views and principles of life in the environment. Disregarded are apocalyptic forecasts, experts' warnings of global risks, hardly anybody listens to the voices of representatives of international organizations who raise the alarm. Global Footprint Network alerts: "Ecological resources are at the core of every country's long-term wealth. Yet population growth and consumption patterns are putting more pressure on these critical assets. Today, the majority of countries in the world are running ecological deficits, using more natural resources than ecosystems within their borders can regenerate. Others depend heavily on resources from elsewhere, which are under increasing pressure. In some areas of the world, the implications of ecological deficits can be devastating, leading to resource loss, ecosystem collapse, debt, poverty, famine, and war" [3]. According to Petteri Taalas, the Secretary General of the World Meteorological Organization, global temperatures are likely to soar to record highs over the next five years, driven by human-caused warming and "This will have far-reaching repercussions for health, food security, water management and the environment. We need to be prepared" [4].

The late 20th and early 21st century were marked by a number of planet-scale processes of key significance in social terms, in particular globalization and formation of the information-oriented society, that have totally changed all the spheres of people's life. In this context, however, we would like to emphasize one more factor of social evolution which has direct impact on the ways of resource exploitation, which becomes a catalyst of the environment degradation, namely: the worldwide establishment of the consumerist society with extremely pragmatic, customer-related approaches toward all the aspects of social life. One can say that mankind has entered the age of globalization and unprecedented scientific and technological progress in the form of consumerist society with related lifestyle, standards, values and priorities.

The analysis of the subject under consideration within the framework of philosophic-synergetic approach shines new light on the problem. When looking on current situation through a broader lens, i.e. from philosophic viewpoint, it becomes evident that the process of social development has come to a critical "bifurcation" point, the state where the system loses its stability. Quantitative changes in resource field inevitably lead to qualitative transformations, the transition of certain parameters through critical values causes a shift of the system to a new level, with regard to social bifurcation to apparently lower level in terms of civilizational development – to the stage of irreversible degradation of the environment and dehumanization of civilization.

As a matter of fact, a change of the development paradigm takes place involving basic transformations of spiritual, psychological, ethical, axiological components of human existence. Growing pursuit of welfare, desire to improve living standards have developed into compulsive craving for luxury, image-building prosperity, conspicuous consumption in the absence of self-imposed limitation, neglect of age-old traditions, moral standards, religious restrictions inevitably results in serious negative effects in many fields including resource depletion. The phenomenon of overconsumption is accompanied by the overuse of natural resources, the attitude to natural environment as if it is an inexhaustive storage place intended to meet immediate wants, disregarding the recoverability of nature, possibility of environmental assets to have been used in the near future and in the long term.

The time has come for mankind to conceptualize the vector of development. Nowadays, being faced with an unprecedented challenge to be addressed, human civilization has an existential pivot to do. Therefore, in the face of threats, quickest possible solving the complete range of mentioned problems at both local, national level and global scale, as sector-wide issues and as an

ideological task is the imperative of the epoch. In this context, one more factor should be considered (pretty much metaphorically) as a non-renewable resource, we mean the time factor: it is crucially important to arrive at the solution until the point of no-return is reached. Activities are to be carried out on a system basis, in all directions in parallel, necessarily including philosophical, socio-humanitarian, ethical dimensions, in fact creating a new paradigm. It is essential for people to get out of illusory perception of the reality, to revise their views on life and place of a man in the world, or in IT terms, to run a "hot restart", reset their mentality. In the ideal case, people's world outlook should be reloaded, but in real practice, it is not in reason to expect the contemporaries to fully reformat habitual patterns and stereotypes;

Thus, the principal challenge of today is to urgently resolve the following dilemma: how to use available natural resources to maximum effect in order to meet ever-growing needs of the contemporaries and at the same time to address the issues related to the conservation and renewal of natural resources for a long-term perspective to ensure the sustainable development and readiness to future challenges. The situation is complicated, multivalued and contradictory enough, but it is imperative to find an escape from the dilemma. As said above, it is difficult if not impossible for most people to change their mentality since they are infected with consumerism, are not able to step out of a habitual comfort zone, to understand a pressing need to reduce their material wants and conserve natural resources for future generations.

Under the circumstances, it is of the utmost importance to give high priority to these issues while working out the national strategy for sustainable development of the country. Of great significance is to develop practices for improving natural resources management, to promote active use of alternative and second resources, to introduce waste-free technologies, and in general to change strategies in the resource sphere towards integrativeness and systematicity. This can be only achieved by consolidated efforts of professionals (experts and practitioners in the field), industrial managers, decision-makers and policy-makers of all levels.

In natural environment, all the resources are interdependent, any perturbation, even small one, within the resource system may trigger a destructive reaction and unbalance the overall system. Accordingly, system approach to this field (as well as to any other complicated area) taking into consideration internal correlations and external disturbances to a great degree improve the efficiency of all subsystems performance. The complexity consists in nonlinear and multifactorial nature of the system; the experts' studies under uncertainty, system nondeterminacy require applying multivariate analysis and other scientific methods.

System analysis of the country resources with discovering correlations between different resources and taking into account modern developments in the field for the purpose of their possible adaptation enables building a relevant model of the resource sphere. Apparently, the development of the conceptual basis should be accompanied by philosophical support. Based on the conceptual model and scientifically substantiated data, the experts can prepare proposals containing recommended roadmaps which will give the opportunity for the authorities to arrive at balanced decisions with due regard to long-term consequences and carry out necessary activities. In this way not only immediate goals can be reached including food and energy security ensuring, but also sustainable development of the country for many years to come.

The unbalanced consumption of resources is a serious threat for individual countries and for the future of global population. And consequently the well-founded decisions for a country may be extrapolated to the whole world especially given that there are many cross-border resources and accordingly cross-border problems. There are good reasons for the authoritative international institutions such as the UN, UNESCO and some others to take an active part in global-scale projects on the above and other urgent issues [5].

A good example of a successful combination of traditional and innovative approaches to a comprehensive study of natural resources is activities carried out at the I.Zhordania Center Studying Productive Forces and Natural Resources of the Georgia of the Georgian Technical University. Here, research is being performed in parallel, with coordinated efforts and in a unified manner by

skilled experts on particular resources. Consistent approach to investigations, fresh angle on the issues, considerable extension of the concept of integral resources and its introduction into active circulation, other creative developments contribute to fruitful work, successful practical application of scientific achievements [6, 7, 8, 9, 10]. One more related activity of the Center researchers is formalization and structuralization of available data on the objects under study, and on this basis building of an electronic platform to visually reflect accumulated information concerning the country's natural resources in a unified format. The visualization of relevant information in the form of hierarchical structure for each resource with regard to interrelations draws a general picture of the field [11]. It would be valuable to the researchers to establish scientific contacts with foreign colleagues and arrange collaboration under research projects with the institutions of similar profile.

Keywords: Georgia, existential challenge, global risk, natural resources, nature management, environmental degradation, ecology, civilization crisis

References:

1. V.Mirzaeva. Georgian engineering traditions. Business-Engineering, No.4, Tbilisi, 2014 (in Russian).
2. V.Mirzaeva. Generatics – a new interdisciplinary field of cognition. Collective monograph of the Institute of Philosophy of the National Academy of Sciences of Azerbaijan, "Teknur", Baku, 2011 (in Russian).
3. Global Footprint Network, <https://www.footprintnetwork.org/our-work/countries/>
4. Heat will likely soar to record levels in next 5 years, new analysis says. The New York Times, May 17, 2023, <https://www.nytimes.com/2023/05/17/climate/record-heat-forecast.html>
5. G.Chogovadze, V.Mirzaeva. Global Challenges and UNESCO's Activities. Transactions - Automated Control Systems, No. 2(26). Dedicated to the 15th anniversary of the UNECO Chair "Information Society" of GTU, Tbilisi, 2018.
6. G.Talakvadze, O.Paresishvili, V.Mirzaeva. Resource potential and economic reforms under the conditions of global instability. Ресурсный потенциал и экономические реформы в условиях глобальной нестабильности. Collective monograph of the Institute of Philosophy and Sociology of the National Academy of Sciences of Azerbaijan, "Optimist", Baku, 2022 (in Russian).
7. Z.Lomsadze, N.Chitanava, G.Magalashvili, O.Paresishvili, et al. Georgian Natural Resources (Brief Review), Annals of Agrarian Science, Vol. 17, No.1, Tbilisi, 2019.
8. G.Talakvadze. Integral resources management – the main condition for the country's sustainable development. Proceedings of the International Scientific and Practical Conference dedicated to the hundredth anniversary of the GTU, Tbilisi, 2021 (in Georgian).
9. G.Talakvadze. Universal integral resources. New vision and approaches. Proceedings of the International Scientific and Practical Conference dedicated to the hundredth anniversary of the GTU, Tbilisi, 2021 (in Georgian).
10. G.Magalashvili. Prospects for the growth of the country's mineral resource potential based on secondary minerals, non-traditional raw materials and some dead rocks. Maining Journal, No.1 (38), Tbilisi, 2017 (in Georgian).
11. Z.Lomsadze, O.Paresishvili, K.Solomonishvili, G.Gaikharashvili. Conception of electronic information platform for the Georgian natural resources. Georgian Productive Forces and Natural Resources, vol. 1(2), "Iverioni", Tbilisi, 2022 (in Georgian).

**ბუნებრივი რესურსები, როგორც ეგზისტენციალური დილემა.
ფილოსოფიური მიდგომა ეპოქის იმპერატივისადმი**

ვალენტინა მირზაევი,

მეცნ. თანამშრომელი, სტუ-ს ი.ჟორდანას სახ. საქართველოს
საწარმოო ძალებისა და ბუნებრივი რესურსების შემსწავლელი ცენტრი

ანოტაცია

დასაბუთებულია თანამედროვე რეალობის კონტექსტში სხვადასხვა ფენომენის მიმართ ფილოსოფიური მიდგომის მოთხოვნა, ხაზგასმულია სამეცნიერო კვლევის ფილოსოფიური მხარდაჭერის მნიშვნელობა კონკრეტულ დისციპლინებში. ძირითადი ყურადღება ეთმობა ბუნებრივი რესურსების როლს ცალკეული ქვეყნების მდგრად განვითარებაში და მთლიანად ცივილიზაციის შენარჩუნებაში. ხაზგასმულია ბუნების მართვის დესტრუქციული ტენდენციები, გარემოს დეგრადაცია, ბუნებრივი რესურსების არაგონივრული ექსპლუატაცია. შემოთავაზებულია სამეცნიერო და პრაქტიკული საქმიანობის გააქტიურება ბუნებრივი რესურსების სფეროში, ინოვაციური მეთოდების და კვლევის ობიექტებისადმი კომპლექსური მიდგომების შემუშავება, კოლეგებს შორის სამეცნიერო კონტაქტების გაღრმავება. მოცემულია ამ მიმართულებით სტუ-ს ი.ჟორდანას სახ. საქართველოს საწარმოო ძალებისა და ბუნებრივი რესურსების შემსწავლელი ცენტრის თანამშრომლების მიღწევები.

საკვანძო სიტყვები: საქართველო, ეგზისტენციალური გამოწვევა, გლობალური რისკები, ბუნებრივი რესურსები, ბუნებათსარგებლობა, გარემოს დეგრადაცია, ეკოლოგია, ცივილიზაციური კრიზისი