

## What Is Political Ecology?

[Tatiana Romanova](#) **From Practice to Theory and Strategy**

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Resume: Political ecology is an extremely interesting and promising area of research – both theoretical and applied. However, further probes are required, that would make it possible to move on from the accumulation of empirical data to the required level of theorizing, and also to devise a comprehensive strategy for the state to follow in practice. Delays in this field would keep Russia in a second-rate position in the world for decades to come.

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A monograph by Sergei Yakutseni and Andrei Burovsky, entitled *Political Ecology* (Russ. Ed.), came out of print recently. The book has many weaknesses: too much empiricism, too few theoretical generalizations, the propaganda-like style of presentation lacking sufficient argument, and eclecticism. Yet the authors have identified a new guideline of interdisciplinary research and practice which will increasingly manifest itself in the coming years. This is a link between politics and environmental protection. Burovsky and Yakutseni define political ecology as “part of the history of humankind inherent in the nature of people,” because environmental decisions “have always had their immediate and long-term political consequences.”

This article is not a critical review, though, but an attempt at an alternative, more theoretical analysis of the link between politics and nature management/environmental protection, as well as a project for practical application of new knowledge. The aim set allows one to define political ecology as an interaction of biosphere resources, ecology, (international) politics and the global economy.

### PROBLEMS OF POLITICAL ECOLOGY

Political ecology as a branch of knowledge has to address three crucial problems: limited resources and their uneven distribution; the relationship between industrialization and pressures on the environment; and finally, pollution and waste. The analysis of the problems in this order looks most logical from the standpoint of the production cycle. All the three problems are present – in one form or another – in the monograph mentioned above, but the consistency of their analysis is not entirely clear. Their definition is not always acceptable, either. Hence we will try to offer a different look on them.

Limited resources and their uneven geographical distribution is the most obvious problem. Discussions about the depletion of mineral resources and biosphere reserves have lasted for quite a while. Initially they encompassed oil and natural gas, which resulted in the adoption of energy saving measures, as well as the development of the so-called 'new energy sources' (including nuclear and renewable ones). It seemed that with the development of technologies and dematerialization of the economy the solution of the problem has drawn nearer. But the debate over hydrocarbons has given way to debate over rare materials and rare earth metals.

It is noteworthy, for example, that on June 17, 2010, the European Union had a presentation of the results of two-year's research into the stability of natural resource supply. In that study, 14 materials (mainly, rare earth minerals) were classified as critically important for modern high-precision instruments and energy-saving technologies. Accordingly, the question arises: What are the guarantees of their stable supply? For example, in September, China imposed an embargo on the supply of rare metals to Japan in response to the arrest of a trawler for fishing in disputed waters of the East China Sea. China controls the production of many important raw materials (antimony, fluorspar, gallium, germanium, graphite, indium, magnesium, rare earth metals, tungsten, etc.). Since 2005 Beijing has been tightening export policies, and by 2015 it plans to outlaw the sale of dysprosium, terbium, thulium, lutetium and yttrium abroad. The aim is to attract companies to produce advanced technologies in its territory. As a result, EU companies may sustain losses.

Besides theoretical research, the European Union joined the United States' suit in the WTO regarding the export of rare earth materials from China. The U.S. Congress and the European Parliament intend to present a common front on this issue to gain most resonance with the debate on these minerals and thus exert pressures on Beijing. In fact, theory has been translated into action. This example proves that the problem of limited natural resources will not disappear with the improvement of technology, but rather gain new dimensions.

Limited are not just mineral resources, but also water, timber, oxygen and land. For example, the production of the very same biofuels, which, we are told, will eventually replace crude oil

and oil products, will require vast arable territories; in the meantime, the European Union, which has set itself a goal of producing 10 percent of the fuel from biological materials by 2020, does not have enough land for that. This will encourage it to seek new patterns of cooperation with countries in Africa and Latin America (first and foremost Brazil).

Forests are another example. They are spread unevenly over the surface of the planet, but they greatly contribute to the production of oxygen and the reduction of carbon dioxide in the atmosphere of the Earth. Should this be taken into account at negotiations on a new regime of cutting the greenhouse gas emissions into the atmosphere? Does this enable Russia, as Nikolai Klyuyev puts it, to lay claim to the title of “the leading environmental power”? And how to convert this into political and legal terms, and what possibilities does it open up for cooperation and coalitions with another forest giant – Brazil?

The second problem of political ecology is related to the level of industrial development, to economic growth and the corresponding growth of load on the environment. Any new industries contribute to the increase of this load. Dematerialization of industrialized Western economies means, as is known, the transfer of production, including dirty technologies, to the developing world. It turns out that pollution occurs in some countries, while all the benefits from using the goods produced there are enjoyed by the people of others, representatives of the so-called golden billion.

On the other hand, placing high-tech production facilities close to the natural resources (as in the above example with China) changes the current economic balance in the world (and eventually, perhaps, the political one as well), creates new jobs, and boosts prosperity in the developing and newly industrialized countries. As a result, they get an impetus for development, even though they do not (yet) account for the bulk of consumption. The strategy of hosting the production of advanced technologies can serve as an alternative to the concept of the golden billion.

In this regard it makes sense for Russia to export not raw materials, but value-added products and finished products – all the more so as this country not only holds a leading position in terms of oil and natural gas reserves, but also controls the production of platinum group metals (platinum, palladium, iridium, rhodium, ruthenium and osmium) that are critical to modern technologies.

Finally, there is a third problem – pollution. Most debatable is the problem of reducing the

emissions of gases causing the greenhouse effect, including calls for an international regime that would regulate emissions after 2012, when the Kyoto Protocol expires. Today the main emissions are from China and the U.S. These two countries are spending not only their own biosphere resources, but also other nations' assets. However, as we know, the issue has a historical side to it: for several centuries most of the carbon dioxide emissions occurred in the West, while China and the newly industrialized countries are merely trying to catch up with the golden billion countries in terms of industrial development and, consequently, emissions.

At the UN climate summit in Copenhagen in December 2009, the major players failed to come to an agreement what principle should underlie the distribution of the burden of greenhouse gas emissions cuts for the period of 2013-2020 (2050). If the advocates of historical responsibility get the upper hand, then the West will have to undertake most of the required efforts, including making mandatory tangible appropriations and providing programs for assistance to the developing countries. Conversely, if the current level of pollution is chosen as the reference point, then the bulk of the expenses for emission reductions will have to be taken by the developing countries. It is also important to see in what way the commitments to reducing emissions will be calculated: in absolute terms in relation to 1990, the way proposed by the Western capitals, or in amounts of GHG per unit of the gross domestic product, in line with Beijing's demands.

The yet-to-be made decisions will directly affect the economic development of the whole world: greater production costs and the ability to create new eco-friendly technologies and conquer markets for them. But the outcome of the negotiations will also (if not primarily) raise a political question: Which of the participants will succeed in pushing through their vision of the new regime and including aspects that will ensure a higher political and economic status for them in the global hierarchy. The scenario of the Copenhagen conference demonstrated only too well how environmental issues proper might give way to purely political bargaining by the leading contenders for the wanted status. The European Union, which regards itself as the main crusader for a better climate, and not without a reason, was simply pushed aside from decision-making by Washington and Beijing. No decisions were taken, though.

The problem of pollution has other dimensions, too. For instance, the costs associated with the pollution of soil often affect not only the territory of the country where it has occurred, but also neighboring countries. Similar effects follow violations of ecosystems in bodies of water. It is common knowledge, for example, that the greatest responsibility for the pollution of the Baltic Sea is born not by the littoral states, but Britain. The waste it produces drifts there with the ocean and sea currents. A similar situation is observed in the growing conflict between Moscow and Beijing over border waterways. The Celestial Empire is the main polluter, while Russia is at the receiving end of its neighbor's economic activity across the border, confronted with all of its negative effects.

Finally, one cannot but mention the problem of storage or processing of wastes, including radioactive ones. Closely intertwined with it is the issue of Russia's import of spent nuclear fuel, which is sometimes mistakenly classified as waste. Meanwhile, as the world's uranium reserves are depleted, that fuel may become at some future date a way of overcoming the shortage of resources. It is unclear, though, to what degree such a possibility justifies the risk of keeping irradiated materials in stock.

Thus, political ecology has to address three problems that can be linked with the production chain: the distribution of resources over the Earth's surface and their finiteness, the development of national economies and the resulting load on the environment, and finally, the problem of pollution and waste. All three are closely interrelated and often cause each other. (The above example of spent nuclear fuel is a convincing illustration.)

The political conflict over the biosphere resources may occur due to failure to address any of these issues. And there is a real threat of its escalation into open confrontation, hostility or rivalry for the right to determine the political, legal and economic regimen in a particular area.

### THE LINK BETWEEN BIOSPHERE RESOURCES AND POLITICS

Next, from the problems of political ecology, we move on to consider the parameters of interconnection between environmental protection and politics. Burovsky and Yakutseni are certain that environmental protection and the use of biosphere resources are now so important for world development and international cooperation that political ecology completely substitutes for political economy.

However, it would be more correct to discuss not the displacement of political economy, but the emergence of a third parameter complementing the politics-economy duet – that is, ecology. And this raises a fundamental theoretical question, and an answer to it allows for both abstract conceptual reasoning and for shaping a strategy of the state. What is the independent and what is the dependent variable in the “politics-economy-ecology” triangle? At least four interpretations are possible here, and to formulate them it is worth borrowing some elements from the theory of international relations.

The first interpretation will follow the school of (neo-)realism, which maintains that only the interests of the state and maximization of its might determine actions by this or that government in the world scene. In this case, the policy of a sovereign state becomes the dominant, while the economy and ecology are pushed into subordinated positions to perform the function of the dependent variable. The main task is to maximize the influence and strength of the state, to translate its interests into life (regardless of whether these are considered as predetermined and immutable, or, if one is to follow neoclassical realism and liberal interstate approach, as a result of internal rifts among various pressure groups).

This is the most well-established relationship in the politics-economy-environment triangle. A large part of history, and of modern times, proceeded in that fashion. One can recall no end of examples of fertile soil and drinking water sources being destroyed in clashes and wars, of colonial exploitation, and of the modern concepts of natural resource importing countries, and of the responses to them from the exporters of oil, natural gas and other minerals (creation of various cartels).

The second approach to identifying the dependent and independent variables in this triangle should be called liberal institutionalism, if one is to follow the well-established terminology of debates in the theory of international relations. In this case we are dealing with politics, the economy and ecology as three independent areas. The function of politics is to create institutions to address common issues for cooperation among countries and peoples in the economy and the environment. And cooperation on the basis of the established institutions, in turn, will change the character of the countries' policies and encourage them to seek peaceful coexistence and cooperation in all areas. In this case, cooperation itself must proceed from both the logic of environmental protection, and from economic interests.

This is a relatively new trend in the international relations theory (its emergence is sometimes correlated with works by Immanuel Kant and Woodrow Wilson's political heritage), which many reasonably regard as idealistic. At the same time, the current (Kyoto) regimen of reducing greenhouse gas emissions fits in best precisely with this paradigm. In the same perspective one can consider the agreements on the phasing out of single-hull tankers for transporting crude oil and petroleum products, on reducing noise pollution and on the regimen of Antarctica.

The third area can be roughly termed neo-ecologism, although this is perhaps not the best definition. Its essence is that ecology serves as an independent variable that influences both politics and the economy. In accordance with this trend the environment and the acuteness of environmental problems determine political and economic interaction between countries.

Through the magnifying glass of neo-ecologism one may analyze such documents as the Kyoto Protocol or the Helsinki Convention on the Protection of the Baltic Sea, which create special regimes. Also, most Western countries put forward projects and action programs precisely on the basis of this paradigm, which places the interests of environmental protection above all other interests. At this point it is worth recalling, for instance, the EU's attempts to back up its actions in the Arctic, to which it has no direct access (Greenland is an autonomous country within Denmark, but not part of the European Union), claiming that the Arctic needs a special regime of environmental protection, and the role of Brussels in it would be indispensable.

Finally, the last, and, in our opinion, most interesting area of political ecology can be called constructivist. Here again we start from the existing theories of international relations. Constructivism (as one of the trends of postmodernism – Ed.) was formed under the influence of the works by Ludwig Wittgenstein, Max Weber and Alexander Wendt. It gives priority to our ideas about what is happening, to the way we understand it, but not to material and objective matters, existing independently from our perceptions and conceptualizations.

With regard to political ecology, this will mean power over minds, over the definition of what is normal and acceptable, and what is subject to change. In other words, there is no predefined interaction of politics, the economy and ecology, there is our perception of biosphere problems through the prism of ideas that either already exist or are being formulated. The identification of this or that problem and the ability to spread this concept constitute the core of power and influence of the state these days.

In practical terms, this usually means the ideological power of the West, its priority in determining what is normal and legal. This or that biosphere or environmental phenomenon is described or explained somehow, and on this basis the “correct” line is determined for policies and the economy to develop along.

As an illustration, we can point to the struggle against global climate change. Everyone is free to decide for oneself whether this is a phantom or not (there are many studies showing that the warming is a natural process on the Earth, independent of carbon dioxide, nitrogen oxides or other gases, and that the ozone holes appear regardless of anthropogenic influences). But the reduction of carbon dioxide emissions, and, potentially, of the emission of other gases is tantamount on the global scale to a certain trend of technological development, where the West has advanced much farther than the newly industrialized countries, industrializing countries, or

Russia. In other words, it spells lasting technological dependence on the golden billion and guarantees of its political supremacy for years to come.

The parameters of reduction can either give the West an advantage in time that the others will never eliminate, or allow some states to catch up with the developed countries and further improve technologies in step with the golden billion.

It is one's own definition of mainstream problems within the politics-economy-environment triangle in conformity with the national interests, as well as its successful dissemination elsewhere that determine the position of a state in the world scene today. On the other hand, the recognition of a country or of an integration association as an environmental leader gives them an opportunity to intervene in the affairs of regions beyond their boundaries (provided the need for environmental protection is reasoned well enough).

The very same European Union claims to be the "green power" in the world. On the one hand, the EU demonstrates a policy that is true from the standpoint of environmental protection, but on the other hand it has been trying to determine the relevant activities beyond its limits (e.g., conditions for shipping and civil aviation and the regime of greenhouse gas emission reductions). This is closely associated with the more general concept of the EU's regulatory leadership.

However, Brussels does not stop there. It takes advantage of the well-established stereotype of its environmental leadership to try to participate in the Arctic governance. Furthermore, the European Union seeks to dictate its own strategy concerning rare minerals and rare earth metals. For instance, it considers the agenda of impacts rare minerals mining has on the environment as an integral part of its resources diplomacy. Another example is Brussels' desire to push through its own version of the greenhouse gas emissions reduction regime after 2012.

The constructivist approach to the interaction of politics, the economy and ecology is closely associated with the competition of values, which has been gaining momentum in the world scene over the past few decades and transferring conflicts between states and other international actors to a fundamentally different track. The ability of a state to identify an attractive project and to spread it far and wide largely determines its position in the hierarchy of international players.



So, there are at least four interpretations of the dependent and independent variables in the triangle of politics, the economy and the environment. The most primitive and simple is the neo-realist one. Liberal institutionalism and neo-ecologism are more idealistic. Finally, the most promising option today is constructivist research into links among the three concepts, as well as the development of the appropriate component of a foreign policy.

In reality, though, modern concepts and political practices offer a variety of combinations of the four approaches, because any “pure” forms are rather hard to come by.

### PRACTICES OF THE MODERN STATE AND SOME RECOMMENDATIONS

The problems of political ecology (scarcity of natural resources, the relationship between meeting the demand for them and the development of the national economy, as well as pollution and waste disposal) are important not just for the development of theoretical knowledge, but also for the practical every-day routine of all countries in the world, including Russia.

The modern state should seek, at least, to minimize its losses in the current and future conflicts over biosphere reserves, and, at the most, to be among the winners and retain its own potential. Such a strategy implies a comprehensive system that combines the internal and external factors, each of which must, in turn, include the ideological and regulatory components and have a strong institutional basis to rely on.

The ideological component means nothing but rational nature management. However, the criteria of rationality must be defined clearly. Obviously, this suggests a mode of resource development that would ensure their reproduction, conversion into finished products in accordance with the interests of a country (promotion of advanced technologies in its territory and minimization of damage to the environment as the development of the national economy goes on), and the maximum recycling of waste and pollution reduction. But each of these guidelines requires further development.

It is important to separate the reality from the regulatory and ideological component that is beneficial to the other countries-participants in biosphere-related collisions, and, if necessary,

to be able to counter them with alternative concepts. This implies competition in the values market, which is equally crucial for the state's political role, the development of individual areas of industry, and the improvement of technologies.

The ideological component, which is intended for "internal use," must have its logical outward extension. Otherwise, claims to environmental leadership will not evoke trust. For an example one can turn to the European Union once again: its influence in the field of environmental protection has been waning of late, as the member states – rather heterogeneous after the 2004 and 2007 enlargements – have been unable to agree on the levels of raising their own obligations (for example, to reduce greenhouse gas emissions or pollution of the soil).

Consequently, the ideological component should not only take into account the biosphere-related interests of a state (or of an integration association and its economy and policies), but also to be consistent within the country and in the world scene.

In developing such a strategy it is hardly possible to postulate the priority of politics over the economy and ecology (in compliance with the neo-realist option). Rather, it is a combination of (neo-)realism, neo-ecologism and constructivism. Moreover, the latter is in the greatest demand in the current situation of regulatory competition and requires well-directed and meaningful efforts.

Another essential component of state strategy is the institutional framework that would ensure uniform and consistent regulation of the way in which biosphere resources are used (from licensing to the control of actual activities) inside a country and abroad.

In this context, the idea of a single state body that would control natural resources management in different spheres looks quite reasonable. In Russia these functions are distributed among several agencies, whereas most Western countries, and some CIS countries, too, have introduced unified government institutions that allow for streamlining activities and removing the internal contradictions. Given the scale of Russia and the regional specifics of its individual parts, it is expedient to determine a reasonable degree of delegating authorities and responsibilities to local levels (leaving no room for parochial egoism, though).

Finally, in foreign policy, this must be complemented by close interaction between the agency

that ensures the rational use of natural resources within the country, and the ministry of foreign affairs. The development of environmental diplomacy is an important component of political ecology. Such diplomacy must have the resource line (the use of natural resources and other riches of the biosphere), and contribute to solving the problems of industrial development and minimizing pollution and waste.

Political ecology is an extremely interesting and promising area of research – both theoretical and applied. The just-started debate has identified the subject of research. However, further probes are required, that would make it possible to move on from the accumulation of empirical data to the required level of theorizing, and also to devise a comprehensive strategy for the state to follow in practice. Delays in this field would keep our country in a second-rate position in the world for decades to come.