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Economic Transition and Environmental Conservation:

Sociocultural Aspects



INSTITUTE FOR SUSTAINABLE INNOVATION

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This book summarizes the experience of applying a socio-cultural methodology of environmental management at various levels of territorial organization (local, regional, Russian administrative regions, federal and national) in Russia. The materials presented offer insight into the institutional aspects of environmental work, expand the toolkit of environmental regulation and demonstrate approaches to a gradual eco-balancing of the economy, curtailing conflicts and discrepancies between the global goals of sustainable development and the interests of local communities and businesses.

The book is designed for a wide audience of experts who have a professional interest in issues of environmental management and conservation.

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Abbreviations

BAT: Best Available Technology

EIP: Eco-Industrial Park

ERS: Earth remote sensing

EU: European Union

EMGM: Environmental management goal matrix

FFI: Federal State Budget Institution

GATT: General Agreement on Tariffs and Trade

GDP: Gross Domestic Product

GIS: Geographic Information System

NDP: Net Domestic Product

OECD: Organization for Economic Cooperation and Development

SD: Sustainable Development

SDG: Sustainable Development Goals

SEIS: Shared Environmental Information System

SEA: Strategic Environmental Assessment

SEEA: System of Environmental-Economic Accounting

SNA: System of National Accounts

SPNA: Specially Protected Natural Area

SPZ: Sanitary Protection Zone

TCSEP: Territorial Comprehensive Scheme of Environment Protection

TIC: Territorial-Industrial Complex

UN / UNO: United Nations Organization

UNECE: United Nations Economic Commission for Europe

WTO: World Trade Organization

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Introduction

The unprecedented scale of industrial and technological impact on the environment and on humanity has created a threat to their further existence. Never before have people borne such great responsibility, because never before have they possessed such power – leveraged by the effect of machinery – over other people, the environment and every living being on the Planet (Lenk, 1982).

Our lifetimes coincide with the mass application of technologies with global impact, and the impossibility of predicting their combined effect makes a period of instability or bifurcation appear inevitable. Prices for natural resources are increasingly volatile, the economies of many countries are in recession, stock markets are moving from stability to turbulence, and serious geopolitical shifts are underway. Social conflicts are growing more acute and the mosaic nature of the economic landscape is more pronounced as new growth areas emerge while many previously well-to-do regions are plunged into poverty. It is no coincidence that the concept of sustainable development is increasingly supplemented and even substituted by the concept of resilience, the opposite of vulnerability. When the period of instability comes to an end, the global picture will have changed significantly and it is important to ensure that the new development scenario is favorable for the survival of humankind.

For the purposes of protecting the environment, it is vital to understand that new technologies presuppose changes in the institutional framework; moreover, many of these changes are not compatible with the existence of industrial institutions, which are rapidly becoming obsolete. Delays in transformation tend to polarize nations by the level of their social and economic development. The simultaneous dissemination of several breakthrough technologies entails unpredictable changes in the social and economic fabric of any society. The transition to a new technology paradigm is deepening social and cultural contradictions, leading in some countries to social conflicts, which are sometimes related to environmental management.

The transition to a new economy entails fundamental changes, as long-established management structures and practices, conventional evolutionary

ideas have to be revised and even, to a considerable extent, replaced. Standards of behavior are being adjusted and the role of behaviorism, including its aspect related to the economy, is on the increase. Experts are increasingly of the opinion that transition to the new economic model requires a radical redefinition of the established view of the role of the individual in economic development: from, being a factor of economic growth, individuals are becoming the real goal of every human endeavor.

The critical nature of the current situation has been acknowledged internationally. The largest-ever United Nations (UN) summit, Rio+20 in 2012, unanimously confirmed the significance of “green” modernization in accordance with principles of sustainable development aimed at the eradication of poverty. In this context we are seeing a reinterpretation of innovation policy by leading international economic organizations. The position of the Organization for Economic Cooperation and Development (OECD) in respect of “green” growth has become more systematic: that organization has decisively acknowledged that the “green” economy is not only a matter of nurturing “green” industries, but involves a commitment to sustainable economic growth, which can “make mobility smarter, make buildings and installations more resource-intensive and pollute the environment to a lesser extent.” A more integrated approach to the formulation of sustainability priorities is the key to resolving many of the complex issues, which we face today. Leading experts point out that systematic institutional changes are needed, since methods of government regulation in many countries are failing to keep up with the development of technologies. This is impeding innovation, particularly by reducing the efficiency of natural resource utilization and hindering waste recycling. Our estimates show that some current environmental mechanisms can even slow down the process of eco-modernization and hamper innovative growth. There is a threat that society may become unmanageable in the transition period, since uncertainty and the imbalance of socio-economic systems cannot be eliminated in the short run, but decision-making cannot be postponed until new knowledge is obtained.

The human response to real or imaginary environmental hazards depends both on objective factors (the source of the hazard, its character, geographical conditions, etc.) and on factors that are subjective, related to the perception of risk, the range of acceptable solutions, etc. Subjective factors are particularly important because, whatever actually motivates human behavior (unconsciously or manifestly), all reasons and motives are fixed in culture. Environmental institutions are inseparable from territorial institutional systems, which have uniform institutional matrixes, in which culture determines the

system of interrelated norms and rules that underlie professional and day-to-day practice (Fomenko G., 2004). History shows that cultural traditions can have both positive and negative elements. They can entail the oppression of people and degradation of the environment, and the rise of new technologies and ideas can stimulate the destruction or the revival of cultures.

The efficiency of environmental regulation depends on: A) the degree of success and flexibility of ethical beliefs regarding the interrelation between society and nature; and B) a choice of environmental institutions that suits the conditions of each culture.

A. The development and dissemination of environmental ethics is of primary importance because the moral imperative has priority in the solution of development issues. Management or chaos, disaster or its prevention, conflict or its civilized resolution, optimal or flawed decisions – all of these are not merely technical issues, but are based on the ethical position of whoever exercises management. For protection of the environment, nothing represents a greater threat than “anomie” (lawlessness, disorder), i.e., the lack of value orientation, a value vacuum, which tends to appear in a period of transition and crisis, when the old standards and values cease to act, and new ones are absent or have not been fully constituted. In these conditions the motivation to resolve environmental issues of crucial importance for society may be lost. There is strong pressure to focus on immediate gain, deviant behavior becomes prevalent and the idea takes root that any expenditure for the well-being of future generations is irrelevant.

Ontological and socio-cultural dependence is a major feature of environmental values (Fomenko G., 2004) and such values need to be distinguished, depending on whether they are ethical goals or means to achieve such goals. As ontologically and socio-culturally determined, environmental values act together in concert, influencing human motivation. Despite their relative stability, they tend to change as ethical norms and rules change and as new knowledge is generated. The extent of their influence differs depending on the worldview that is dominant in a particular socio-cultural community. Thus, in the late 20th century in a number of European countries it became unacceptable to decorate one’s home with animal skins and cruelty to animals became a punishable offence. Environmental ethical motivation for human behavior is institutionalized through moral codes.

Recognition of the global nature of environmental problems increases the importance of a universal ethical code that can be used as a benchmark for behavior (Laszlo, 1997). The creation of such a code depends on the ability of various cultures to accept and share at least some uniform environmental standards. Today, at the beginning of the 21st century, the need

for an ethic, which could be a basis for moral behavior, is understood and the Earth Charter¹ may well be the best candidate to play the role of such an ethic. Its preamble states, "We stand at a critical moment in Earth's history, the time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace."

According to Hans Jonas (2004), the notion of homo sapiens ought to be substituted by that of homo responsabilis, and traditional ethical systems should be substituted by an ethic of responsibility. This position is consistent with the opinion of Albert Schweitzer that the achievement of a harmony between Society and Nature depends on human's assumption of responsibility for nature and on the love of nature, the development of a truly humane world outlook in the human-nature system.

The summary document adopted after the Earth Summit by the UN General Assembly (September 2015), Transforming our World: the 2030 Agenda for Sustainable Development, and the Sustainable Development Goals set the task of harmonizing the national development priorities of countries with a global agenda for humanity's survival. The Summit established 17 Sustainable Development Goals and 169 targets for the achievement of those goals. The UN Secretary-General hailed the event as historic and stressed that the new sustainable development agenda requires global solidarity. The adoption of the Development Goals entails new efforts to disseminate uniform approaches and opens new horizons in education.

B. It has been recognized since time immemorial that different countries have different cultural stereotypes, and these stereotypes determine ethical standards of human behavior. Cultural codes change very slowly, so reliance on culturally determined basic institutional matrixes is highly important in any critical period of transition to a new development model. The Rio+20 Summit of 2012 acknowledged the inevitability of multiple approaches to the self-development of territorial institutional systems within the framework of a single sustainable development mainstream for the entire planet. The challenge in environmental protection is to "fine tune" the adaptation of universal environmental institutions to the socio-cultural conditions of specific territories. Such fine tuning is always individual. The aim is to achieve an

¹ The Earth Charter. Online at: <http://earthcharter.org/>

optimal correlation of universal and socio-culturally determined environmental institutions based on ethical constraints and priorities associated with cultural traditions. The present book proposes an approach to the gradual eco-balancing of existing territorial institutional systems, based on the hypothesis that different cultures have their own value constraints for rational choice in the Society-Nature relationship. Post-neoclassical rationality greatly expands the perception of the world and the concept of “sustainable development”. It not only generates a need for in-depth systematic research, but also poses new practical tasks in order to clarify the socio-cultural factors, which determine the efficacy of specific environmental institutions in particular communities and define the range of available solutions in environmental management.

The socio-cultural foundations of environmental management are often undervalued, despite the obvious fact that any human activity is directly dependent on people’s beliefs and that their beliefs are, in turn, dependent on their culturally-tinted self perception in the surrounding world. In other words, environmental activities depend on a vision of the future and on the historically shaped range of decisions by those responsible for management. Those decisions depend not only on the information, which is available, but also on certain cultural constraints. This issue is still underexplored because environmental ethics, behavioral geography and economics are evolving independently of each other, despite current changes in the approach to the study of human behavior in the environment.

The present book acquaints the reader with socio-cultural approaches to environmental management developed by the authors over a period of 20 years at the specially established Cadaster Institute, and offers particularly interesting examples of the practical application of these approaches. The book should be of use both to practitioners of environmental management and protection and to anyone who is interested in the environment and sustainable development problems as such.

We hope that the book will help the reader gain a better insight into the institutional peculiarities of environmental activities, expand the set of tools for environmental regulation and provide better understanding of how a gradual eco-balancing of the economy and further progress towards sustainable development can be achieved, easing conflicts and contradictions between the global goals of sustainable development and the interests of local communities and business.

Conclusion

There is no more important challenge than the preservation of life on Earth. This challenge can only be met by an integrated, trans-disciplinary approach, which treats any evolving complex system – including emergent socio-cultural systems – as a set of coherent, developing, interactive processes that manifest themselves through time as globally sustainable structures, quite distinct from the equilibrium or rigidity of technological structures (Janish, 1980). Recent advances in science and technology mean that the sophisticated technical systems, which are implemented in the social and natural environment, penetrate information, cognitive, bio- and nanotechnological spaces in a manner that is increasingly broad and uncontrolled, leading to unexpected and often undesirable synergetic effects with a range of unpredictable consequences. Hence a state of instability in society and the appearance of a universal discourse, where an uncertain future generates and verbalizes new forebodings and anticipations (Aseyeva & Pirozhkova, 2015).

The final document adopted by the 70th UN General Assembly (September 2015) *Transforming our world: the 2030 Agenda for Sustainable Development* and the Sustainable Development Goals set the task of harmonizing national development priorities with a global agenda for the survival of humanity. This presupposes the general acceptance of supreme environmental values, which lend universal human significance to efforts to protect and preserve the natural world. Each individual then has the opportunity, by comparing the ethical standards, which currently govern the relationship between Society and Nature in our world, with global ethical codes such as the Earth Charter⁷⁴, to see the vector of reasonable institutional change. Further, a capacity is provided for identifying the institutional constraints, which limit the application of environmental management tools at a specific time and in a specific place.

The research, which has been carried out regarding a corridor for institutional changes in the environmental sphere in Russia (Fomenko G., 2004; Fomenko G., 2011; Fomenko G., 2014), shows that such changes depend both

⁷⁴ <http://earthcharter.org/>

on the ideas about the future, which are dominant in society, and on specifics of the basic institutional matrix. Now, more than ever, the smooth transition of Russian society to sustainable development and a green economy require resolute and systematic efforts by elites to expand the existing socio-culturally determined range of possible solutions. This is a vital, but extremely complex and “delicate” task, requiring due respect for the cultural codes that can lead the country to a decent future, while identifying those codes, which impede sustainable development and impair the competitiveness of Russian society at the global level.

It is a sad fact that, in the course of the 20th century, Russia gradually lost many of its traditional institutions, which were oriented to protection of the natural environment, particularly institutions based on local self-government.

Legislative regulation of natural resource use (formal institutions for the protection of the environment) ceased to function in Russia during the 20th century, when the abolition of private ownership in urban and rural communities had the institutional effect of reviving much older archetypes, characteristic of the pre-Romanov Muscovite principality. The effect of this was to put a brake on the process of modernization.

Soviet legislation was intended as an entirely new edifice. But, during the Soviet period, new institutions for natural resource management (good and bad) became embedded in historically determined matrixes (one cannot abolish informal institutions!) and became a part of the Russian cultural landscape, reflecting the pre-Soviet, autocratic model of government. The historical paradox is that the legislation in place in Russia today is a continuation of the Soviet legal system, which, in many respects, was more conservative than its imperial predecessor.

The interrelationship of society and nature in Russia’s institutional space is defined by the specifics of Russia’s culture of resource use, which remains extensive, i.e. based on the wasteful use of resources. In any critical situation, an extraordinary squandering of human and natural resources tends to assert itself – an attitude of “victory at any cost”. Surveys of public opinion have shown that Russia’s enormous size is a source of pride to most of its population⁷⁵. Russia has traditionally lacked volunteer-based institutions and most horizontal forms of environmental cooperation have been poorly developed. The traditional rural institutional framework, based on communities (the “obshchina”) was destroyed in the 20th century when the enslavement of the peasantry assumed greater proportions than ever before, albeit in a different form. This made it harder to achieve collective, compromise solutions. The tendency to see the

⁷⁵ Opinion polls conducted by the Levada-Centre in **2015**.

world in terms of a permanent conflict between good and evil, without any search for compromise or a happy medium, far from being overcome, actually grew stronger during the Soviet period. Ever greater socio-economic instability worldwide may lead to the neglect of environmental responsibility, as the planning horizons of those who hold power over natural resources become more narrow (Fomenko G., 2014).

In this context, the institutional corridor for change in the environmental sphere tends to shrink. Control and administrative government regulation remain the most efficacious tools, and their development readily borrows institutional ideas from international experience. Economic tools based on sustainable ownership rights are of limited use in present conditions in Russia, and this complicates institutional changes in environmental management, such as the application of internationally accepted methods for the assessment of damage to the environment. In this context, it is clear why penalties based on a standard costing method are so popular in Russia today. As regards environmental damage inflicted in the past, uncertain ownership rights often leave current taxpayers, rather than the original perpetrators, to pick up the bill, since the original perpetrators are almost impossible to identify.

Environmental activities in the context of sustainable development, based on the post-non-classical understanding of rational resource use, set their objective parameters on the basis of ethical values, which are a benchmark for assessing reality. One must also bear in mind the considerable dynamism and instability of the Society–Nature system, especially during periods of crisis, which are characterized by random and unpredictable effects, greater impact from the events of social life, and the appearance of new actors who seek to satisfy their aims and desires and who are forced to make preferential or acceptable decisions (Streletsky, 2014).

In this situation, special attention should be paid to a “management by objectives” approach at all levels of territorial organization, with particular emphasis on its teleological aspect. The setting of objectives is critical for any management process, including natural resource management and protection of the environment. It is important to note the much greater status and impact on everyday life, which are accorded, in the Russian spiritual tradition, to values. This is in contrast with the priority accorded to interests in the western tradition and it entails special attention, when designing institutional change in Russia, to value-based standards, determined by the culture-specific system of values and beliefs. Now, as never before, we must work to rebuild the humanity of Russian society, severely damaged by the Bolsheviks’ demolition of the old value system and their aborted attempt to build a new system based on atheism and an often-vulgar understanding of materialism.

With Russia's security and sustainable development at stake, we need a systemic approach to the green modernization of the country, based on economic and social change. Cultural modernization sets special challenges, since institutions (both favourable and unfavourable for national development) are imprinted in culture. They are not only long-lasting, but may appear to the collective consciousness to be untouchable. Any attempts to rapidly demolish cultural traditions bear serious social risks: the limited result that may be obtained in terms of economic growth is quickly cancelled out by subsequent losses, as convincingly demonstrated by the Maddison dataset.

Our research has convinced us that populism and belief in miracles are dangerous obstacles on the path to sustainable development. What works best, despite its difficulties, is the gradual approach recommend by the ancient Chinese proverb: "A journey of a thousand miles begins with a single step". World history and Russian history offer examples (albeit few) of successful modernization initiated by elites, purposefully adjusting cultural codes without the loss of national identity. Most instructive for Russia is the experience of the BRICS countries, particularly China, where cultural modernization, including that of the Society–Nature relationship, has been systematically implemented in recent decades, taking account of national socio-cultural specifics, consolidating traditional cultural codes while rejecting those codes, which hinder modernization processes based on sustainable development.

We would state in conclusion that acceptance of the systemic character of green modernization and of the crucial role played in environmental activity by moral motives, together with a post-non-classical understanding of environmental management, are changing the conceptions of national transition to sustainable development. We must grasp the significance of a humane approach to the greening of ethical standards, because a caring attitude towards the natural world, to animals and plants, is inseparable from respect for the individual and love of the world around us. Mechanisms of environmental regulation that regard people as passive objects of government control, as means for achieving goals beyond their comprehension, have never been effective anywhere, in either the long or short term. The socio-cultural specifics of territories must be taken into account in every project for rational resource use and conservation. This is what we call a socio-cultural approach.

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