

1 Introduction: towards an understanding of the Soviet concept of conservation

[Conservation is] the rational use, renewal, increase, and protection of natural resources. . .

One of the most honored concepts in the world today is that of natural resource conservation, and its success can be measured by the increasing amount of political charisma it displays. Its magical and somewhat mystical nature was early noted by President Taft, who observed that most everyone seemed to be in favor of conservation, no matter what it meant. Although the somewhat enigmatic term originated in the United States, this concept has quickly gained favor in all parts of the world, and certainly not least in the Soviet Union.

The U.S.S.R. comprises one-sixth of the earth's land surface and probably at least an equal share of its biotic and mineral resources, and, inevitably, has become deeply concerned with the problems of judiciously managing its bountiful, but by no means inexhaustible, natural resources. The nature of this contemporary Soviet concern for natural resource conservation will be the central theme of this study. By examining a wide variety of natural resources and some of the major problems associated with their utilization in the U.S.S.R., the effectiveness of the Soviet approach to the management and conservation of these resources will hopefully be drawn more clearly into view.

Today, of course, conservation efforts cannot always be restricted to the internal territories of individual countries. Soviet and American specialists alike acknowledge that many aspects of natural resource conservation and environmental quality are not just national problems, but are of vital international concern as well. Everyone in the world must breathe the same air, extract the resources of the same world ocean, share in the use of the total land resources, and suffer the common consequences of numerous activities that may adversely affect the climatic, mineral, aesthetic, and biotic resources of the entire world – with the term 'biotic resources' being understood to include man himself. We are all ultimately dependent upon a single world environment, not scores of little ones neatly defined by invisible national boundaries.

As this concern for global environmental quality, sometimes referred

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to as the 'spaceship earth' concept, becomes more widely understood and accepted, the attitudes and actions of other governments in the field of conservation take on an increasing importance for us in the United States. Such activities in the Soviet Union, as the largest country in the world and a close neighbor, are perhaps of the greatest significance.

Conservation activities in the Soviet Union, as would be expected, are carried out in a considerably different political context than they are in the United States. Two factors in particular are strikingly different. The first is that the government owns all of the land and water, and all of the associated natural resources found within them. The second is that all aspects of the national economy, and hence all uses of natural resources, are centrally planned by the U.S.S.R. government. Taken together, these two factors mean that the Soviet government alone is solely responsible for the conservation of its natural riches; only the state can exploit them, only the state can conserve them. At the same time, the authoritarian nature of the Soviet political system and the paternalistic nature of its economic system have combined to discourage public participation in natural resource use decisions. As a consequence, there is less awareness on the part of the average Soviet citizen as to what constitutes good conservation practices, and to the importance of their implementation, than is the case with his American counterpart.

Before attempting to evaluate the Soviet understanding of the term 'conservation', it might be well to consider how its meaning has evolved in the United States up to the present time. When Gifford Pinchot and his compatriots gave America the word 'conservation', they unfortunately neglected to give us an adequate definition to go along with it. Most of the early definitions ('wise use', 'the greatest good for the greatest number for the greatest length of time', etc.) say at the same time everything and absolutely nothing at all. How do we determine the wisest use, the greatest good? The difficulty is that we are attempting to take a fantastic array of natural resource problems, which are often closely interrelated in both tangible and intangible ways, and to lump all possible approaches to untangling and solving these problems into a single term – 'conservation'. Lacking a precise definition, Americans have generally viewed conservation as meaning a way of acting ('wise use'), or as a set of commandments saying 'thou shalt' or 'thou shalt not' when one is in the woods, using water, farming, mining, etc. But this no longer represents the heart of the matter.

Rather, the concept of conservation today centers around the method of *approach* to resolving natural resource use conflicts; in essence, one of careful long-range planning. Stated more formally, it might be said that conservation implies an objective and comprehensive evaluation of all the

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various ways in which a given natural resource complex might eventually be utilized, so that short-sighted or even irreversible decisions will not preclude additional or alternate uses of the same resource in the future, as the composition of demand for natural resources changes with time.

This view of conservation obviously calls for caution in the single-purpose development of any resource in an irreversible manner; that is, in any way which would preclude some other or additional use of the resource at a later date. It also suggests that it may be pointless to base long-term planning decisions on the assumption that we have 'x numbers of years of reserves of a given resource at the present rate of use', when changes in demand or technological substitutes may greatly lessen (or increase) our need for the resource within a relatively short period of time (e.g. anthracite coal).

This concern with changes in demand and technologies reflects yet another contemporary point of view. Today, natural resources are being seen less as simply an input into production or as a way of raising the gross national product, and more as adaptable, versatile instruments for increasing the total quality of people's lives. A forest, for example, is no longer simply a source of lumber, but is also recognized as a watershed, a soil protector, an oxygen producer, a wildlife habitat, and a diverse recreational complex. If the economic use of the timber decreases any of these environmental benefits of the forest, should not this lowering of the net quality of the environment be reflected in a corresponding reduction in the gross national product? At least one Soviet economist supports this idea, and advocates lowering the annual rate of industrial growth in the U.S.S.R. to achieve a balance of nature.¹ In this manner, the understanding of the term 'conservation' is shifting from a concern with the quantity of natural resources to a concern with the quality of the total environment.

In the Soviet Union at present, this view is becoming more frequently espoused, particularly by members of the academic and scientific communities. Until rather recently, natural resource conservation was not a widely propagated concept in the U.S.S.R. The traditional love of the Russian peasant for his native land, so well reflected in Tolstoy and Sholokhov, of course could not guarantee that he would utilize that land with the trained insight of a modern conservationist. Land use practices in tsarist times, unfortunately, left much to be desired.

Even today, however, Soviet conservationists must necessarily still concern themselves to a large extent with problems of the wasteful and inefficient use of their country's natural resource endowment, and Supreme Soviet resolutions embodying 'urgent measures' for preventing erosion or pollution appear frequently in *Pravda* or *Izvestiya*. Perhaps a major reason for this is that in the past Soviet writers generally attempted to convey the

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idea, partly for political reasons, that their country's resources were virtually inexhaustible. Today, this view is openly challenged by those who see the end of the limitless frontier approaching for the Soviet Union, even as it did for the United States. In the words of a noted Soviet geographer, D. L. Armand:

The theory that now, at an exacting moment in the construction of communism, we can take a 'loan' from nature, that our children will live better, and then they will return the debt to nature... the forests to barren wood-cutting areas, the fish to poisoned rivers, and so forth, must be given a resolute rebuff. This is neither a wise nor a courageous theory.²

Although the views of Soviet conservationists have been given increased consideration in recent years, economic planners nevertheless are still frequently cited for placing an overriding emphasis on plan fulfillment, and on obtaining the maximum possible short-term benefits from the use of Russia's natural resources. As the editors of a leading work on the U.S.S.R.'s natural resources have charged:

Many workers in planning and economic organizations do not take into account the need for a cautious and thoughtful approach to natural resources in their practical work. They often think of nature as an inexhaustible reservoir, from which the useful product may be extracted forever, concerning themselves only with how much faster and how much more can be taken out and utilized.³

That many Soviet planners and administrators still look at various types of natural resources as inexhaustible should come as no surprise, for the usual system of categorizing these resources in the U.S.S.R. employs this exact same term. For example, the following classification is frequently found in Soviet works:

All natural resources:

- A. Exhaustible (*Ischerpayemyye*)
 1. Non-renewable: most mineral resources
 2. Relatively renewable: soils, mature forests
 3. Renewable: vegetation, wildlife
- B. Inexhaustible (*Neischerpayemyye*)
 1. Cosmic: solar radiation, tidal power
 2. Climatic: air and air masses
 3. Water⁴

In fact, the authors of the preceding quotation themselves use the term 'inexhaustible' in describing air and water resources.⁵ It is only in very recent years that the commonplace use of this term has been called into question. It is hardly surprising, therefore, that economic workers tend to retain this concept, and some of the undesirable consequences which can arise out of such a belief are cited throughout this study. These unfortunate consequences are intensified by considerable laxity in the en-

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forcement of the Soviet Union's existing conservation regulations. The need for economic planners and administrators to be more familiar with the basic precepts of natural resource conservation and environmental ecology is clearly a phenomenon common to all nations and economic systems of the world.

As is the case in the United States, part of the Soviet problem may arise from a lack of understanding on the part of economic planners, and others, as to what the Russian term for 'conservation' actually implies. Unlike the English word 'conservation', which suffers from a difficulty in defining it at all, the Russian term has the disadvantage of being comprised of two words whose specific individual meanings may tend to give the whole phrase too restricted a connotation.

The term for 'conservation' in Russian is *okhrana prirody*. *Okhrana* means 'protection' or 'safeguarding', and *prirody* means 'of nature'. Taken at face value, then, the whole phrase is somewhat limiting, as evidenced by the fact that in the early part of this century the phrase was most often used only in connection with the establishment of nature preserves.

Today, the literal meaning is clearly too narrow. To be sure, the 'preservation of nature' implies ecological studies, sustained yield logging and fishing, pollution prevention, and other examples of the beneficial, enlightened use of natural resources. But does the current popular Soviet understanding of this term include the study of conflicts between two or more beneficial uses of the same resource complex? Does it imply the consideration of all the tangible and intangible aspects of deciding, for example, whether a dam for flood control or power should submerge an agriculturally or recreationally useful valley?

For the Russian term, too, a more rigorous definition is needed, and suggestions and elaborations which embrace a broader, somewhat more sophisticated approach to the problem are frequently being put forth by biologists, geographers, ecologists, and others. For example, the internationally respected Soviet zoologist, A. G. Bannikov, writes that

it is necessary to insure an adequate supply of natural resources through the principle of a maximum sustained yield [lit.: 'large-scale reproduction']. In this lies the main problem of conservation today.

Thus, the conservation of nature from an economic point of view is managing natural resources so as to secure from them a maximum sustained yield.⁶

He appears to be thinking here primarily of biotic resources. However, a little later he adds:

Besides its important economic significance, the problem of the conservation of nature also has tremendous aesthetic and public health significance... The aesthetic value of nature is impossible to appraise.

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We preserve nature for people, for those of the present day and of future generations. We protect that environment in which people live and in which they will always have to live.⁷

Another interpretation is offered by G. P. Motovilov:

The concept of 'Protection of Nature' in . . . the U.S.S.R. consists not in a passive preservation of the natural wealth, but in the carrying out of a system of diverse active measures directed towards preserving, restoring, and expanding the natural wealth and regulating its exploitation in the interests of the present and future generations of mankind.⁸

A more formal definition of the term *okhrana prirody* has been put forth in a recent work on conservation in the Soviet Union: '*Okhrana prirody* – this is the complex state, international, and social measures which direct the rational use, renewal, increase, and protection of natural resources for the welfare of human society.'⁹ These definitions illustrate that the literal meaning of the Russian phrase *okhrana prirody* is now broadening considerably, and that its current interpretation is becoming more similar in scope to our own understanding of the term 'conservation'.

The foregoing Soviet definitions of conservation contain several phrases which are close counterparts of traditional American conservation terms. As examples, our 'multiple use' is related to the Russian phrase 'complex use', 'wise use' becomes 'rational use', and 'sustained yield' is embraced in a Russian phrase translatable as 'large-scale reproduction' (although the latter phrase also implies expanding, if possible, the physical stock of the resource). A more thorough discussion of these Soviet terms is contained in Appendix 1.

The Soviet view of the development and conservation of natural resources is associated with an interesting conceptual consideration, involving the manner in which Soviet economic planners look at the man–environment relationship. They tend to speak in terms of the 'planned transformation of nature' (meaning extensive reclamation projects and other similar measures) as a means for improving the agricultural and industrial productivity of the country and, in turn, the well-being of the people. For Soviet planners, natural resource conservation is being increasingly viewed and defined in the light of this desired 'transformation of nature'. A leading Soviet geographer, in fact, has stated that 'under contemporary conditions the conservation of nature is becoming inseparable from its transformation, from the rational exploitation of its resources.'¹⁰ By this he means that the extent of man's utilization, adaptation, and re-structuring of the natural environment (the 'transformation of nature') is today occurring on such a widespread and interrelated scale that in essence virtually all problems of the conservation of natural resources and of the natural environment are in reality problems involving the quality

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and comprehensiveness of the planning by which such transformations are carried out.

Whereas it would not be difficult for most American conservationists to agree with this analysis, they might well disagree with the extent to which Soviet planners tend to laud such transformations as the very basis for contemporary social progress and welfare. Some Soviet economic planners advocate future developments of unbelievable scope, which would literally transform the basic hydrologic cycle and biological relationships of entire continents (damning the Congo River, the Oresund, the Bering Straits, etc.). Rarely do they dwell on the difficulty of forecasting all of the possible ecological consequences of these changes, only the supposed economic benefits.

Gerasimov, however, is a far more responsible academician than this, and he does go on in his article to make a plea for a more thorough procedure for ascertaining in advance all the likely consequences of such transformations. The need for this type of approach has been increasingly stressed in recent years, and appears to reflect a growing sophistication on the part of Soviet natural resource specialists. Putting such sophistication into actual practice by local natural resource planners and users, however, remains as much of a problem in the Soviet Union as it does in the United States. Neither country's planning system seems capable, at present, of adequately appraising the full range of social costs which are involved in major natural resource development projects, and in 'large scale transformations of nature'. Hence, a somewhat greater degree of caution in initiating such projects would seem advisable in both countries.

It should be pointed out that most Soviet works on conservation, particularly those designed primarily for educational purposes within the U.S.S.R., are careful to present their material on the use of natural resources in a proper Marxist context. Among other things, this precludes any suggestion that the physical environment is a controlling determinant of societal development ('environmental determinism'). It also involves the ideological assumptions that natural resources will invariably be wastefully exploited in a capitalistic economy, but that under a state form of planned economy they will necessarily be utilized in the wisest possible manner. The possibility, under capitalism, of either private enlightenment or effective governmental supervision in the field of natural resource use seems to be ideologically unacceptable to Soviet theorists. More importantly, they are also reluctant to admit that a central planner, having the primary goal of rapidly developing the economy, might easily make the same inefficient use of natural resources as would a selfish private businessman who was trying to maximize his output, and for the same reasons. The point being made here, one which will be repeatedly illustrated in the en-

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suing chapters, is that political ideologies are less important for natural resource conservation than are implicit national developmental priorities, and that enlightened conservation practices are not second nature to any form of economic system.

Perhaps in partial recognition of this, it has become common in recent years for knowledgeable Soviet citizens to call attention to short-sighted or wasteful natural resource use practices, and public education regarding proper natural resource usage is being more widely encouraged. This developing trend towards broader public participation in conservation affairs has great potential importance for the Soviet Union, for in a centrally planned economy the people represent the only independent check on poorly planned natural resource usage. The need for a much greater public understanding of the concepts of natural resource conservation represents an account which has been overdue in the Soviet Union for years, even as it was, and to an extent still is, in the United States.

Present Soviet attitudes towards the use, transformation, and conservation of the U.S.S.R.'s natural resources will be considered in more detail in the concluding chapter of this study, following an examination of current Soviet approaches and problems in each of the major areas of natural resource management.

2 The historical and institutional framework of conservation in the Soviet Union

...Stalin's genius will...make it possible to master the forces of nature in the U.S.S.R.

The history of the state management of certain natural resources in Russia has an early beginning. Under the tsars, however, this management was rather sporadic, and reflected to a large extent the personality of the particular tsar in power. As a result, the natural resources of the country were generally not too well cared for, and a spontaneous conservation movement began to develop around the turn of the present century. This movement, however, was destined to be cut short by the 1917 revolution. Today, conservation is a state responsibility, and in the past decade has received a greatly increased amount of attention. The brief review which follows of natural resource conservation in the tsarist period will help to put current Soviet practices into a clearer historical perspective.

The pre-revolutionary conservation movement in tsarist Russia

In the early years of Russian tsarism, conservation was a very pragmatic affair, and quite limited in scope. Since at that time hunting was both the main form of recreational activity (for the nobility at least) and an important economic activity, decrees regulating the killing of wildlife constituted the majority of the earliest laws concerning the management of Russia's natural resources.

Peter the Great (1682–1725) represents a notable exception to this generally subjective approach to natural resource management as practiced by the Russian tsars. Peter was the first and perhaps the only tsar to appreciate the need for conserving natural resources in general as a desirable long-range national policy, rather than as isolated responses to immediate needs or crises.

He was particularly concerned with preserving the forests of Russia and, in a very progressive step for its time, ordered timber companies to separate their holdings into twenty-three to thirty sections, only one of which

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could be cut a year. He also divided all of Russia's forests into restricted and non-restricted categories, and during his reign the first afforestation efforts were carried out in portions of the southern steppe regions.¹ In another act, Peter prohibited the cutting of forests in a belt 50 versts (53 kilometers or 33 miles) wide along major rivers and 20 versts (21 km or 13 miles) along smaller ones. It is interesting to note that this is a wider restricted zone than exists today, which is at the most 20 km wide (Table 6.1). He issued decrees for the protection of sable, elk, and beaver, for outlawing rapacious fishing practices, and even for controlling pollution in St Petersburg's waterways. All his conservation measures were enforced by extremely harsh penalties.

Table 2.1 *Decreases in forested area in tsarist Russia*

Region	Forested area (per cent)			
	1696	1796	1888	1914
North (Arkhangel'sk, Vologda and Olonets guberniyas)	72.9	72.3	69.5	66.9
Central (Vladimir, Kaluga, Moskva, Rязan, Smolensk, Tver, and Tula guberniyas)	53.2	41.6	30.7	22.2
Baltic (Estland, Lifland, and Kurland guberniyas)	52.0	43.7	25.6	23.2
Forest-steppe (Voronezh, Kursk, Poltava, and Khar'kov guberniyas)	18.4	12.1	8.1	6.8
Southeast (Astrakhan' and Stavropol guberniyas and Don oblast)	2.4	1.9	0.98	0.97

From M. A. Tsvetkov, *Izmeneniye lesistosti Yevropeyskoy Rossii* (Moskva: Izdatel'stvo Akademii nauk S.S.S.R., 1957) pp. 126–31.

The tsars of the latter part of the eighteenth century had little of Peter's insight into the need for conserving natural resources. The forests began to be cut again, particularly after 1782 when Catherine the Great in effect rescinded Peter's forest management regulations. A somewhat greater concern for the preservation of wildlife was maintained after Peter's death, and in 1763 the concept of a hunting season began in Russia when Catherine issued a decree banning hunting from March 1 to June 29 to allow animals to bear their young.²

During the nineteenth century, as the tempo of natural resource utilization increased greatly with the beginnings of industrialization, the incidence of shortsighted and wasteful exploitation of these resources increased as well. The stocks of elk began to be depleted again, and the forests con-