Editor's Note: Environmental Practice will frequently publish articles and brief news items on the state of the environment and environmental practice in Russia and the other republics of the former Soviet Union. Professor Thomas B. Rainey of The Evergreen State College, a Contributing Editor of Environmental Practice, is arranging for these materials. He prepared the following as a brief primer to introduce non-Russian readers to the basics of protecting areas in Russia and the other countries of the former Soviet Union.

Protected areas are now an important concept in the environmental management policies of highly industrialized countries. Most environmental practitioners, even those not working directly on the management of protected areas, are affected by the existence of these lands. For example, protected areas provide a basis for measuring human impacts in non-protected areas. They might also provide opportunities for recreation and the preservation of critical resources, such as wetlands and water supplies for nearby cities and agriculture. And, perhaps to the horror of environmentalists, protected areas are like money in the bank: their resources can be used later if needed.

Countries have approached the problem of protecting lands from human impacts in quite different ways. American readers of this journal will be familiar, for example, with the National Parks system, the U.S. Forest Service, and the lands managed by the Bureau of Land Management. Efforts to develop "ecosystem management" methods have been important for these different kinds of federal lands in the last few years. As you will see in the following news story, however, the methods for nature protection in Russia show interesting contrasts to the situation in the U.S. This journal is pleased to publish Dr. Rainey's contribution. It is our belief that practitioners can come to know their own methods better by understanding how someone else does it.

Protected Areas in the Republics of the Former Soviet Union

Thomas B. Rainey, PhD

From 1917 to 1991, political authorities and scientists constructed throughout the Soviet Union an impressive system of protected areas. Since 1991 the government of the Russian Federated Republic and of some other successor republics have attempted to maintain and even expand this system. As of the Spring of 1999, the Russian Republic alone, which consists of European Russia and all of Siberia, contains 98 nature preserves (*zapovedniki*), 32 national parks, and hundreds of special purpose reserves (*zakazniki*) and natural monuments (see Table 1).

The governments of Russia and the other republics recognize other categories of protection, but the zapovedniki, the national parks, and the zakazniki are the most important. Unquestionably, Russian officials and citizens regard the zapovedniki as most sacrosanct; the flagships of a vast fleet of protected areas. The nautical metaphor is appropriate in an ironic sense, as the protected areas are now barely able to stay afloat in an ocean of environmental degradation, the result of over 75 years of breakneck industrialization and urbanization. Altogether, the protected areas in Russia cover about 35 million hectares, slightly over 4 percent of the Russian and Northern Eurasian land mass.

The United Nations Educational, Scientific and Cultural Organization has designated several zapovedniki, "territories totally withdrawn from economic utilization," as Biosphere Preserves, part of the Man and Biosphere program, which seeks to protect "representative ecosystem types" around the world. Very recently, the Organization has also recognized the Lake Baikal watershed in Siberia, which contains several zapovedniki and parks, as a World Heritage Site, worthy of global environmental protection.

Most of the protected areas in Russia lie within the highly industrialized and densely populated regions of the country, west of the Ural Mountains. The newest and largest *zapovedniki* the system are in Siberia, which was relatively untouched until recently by heavy industrialization and urbanization.

Nature preserves, and parks to a lesser extent, are supposed to provide habitats and some measure of protection for the nearly 500 species of plants and 250 or so species of animals listed in the *Russian Red Book* of Endangered Species. The other republics and some regional governments within Russia have also published red books of endangered species specific to their areas. Prepared by knowledgeable scientists and specialists, the red books serve as bibles for endangered species, used for scientific study, environmental education, and protection, when the responsible agencies can afford to print and distribute them. Budget permitting (a major condition), red books are to be updated every five years. Theoretically, *zapovedniki* are bound to protect and preserve all species within its boundaries, not just those that are listed as endangered.

Unfortunately, financial chaos and political instability now threaten the system of protected lands in all the former republics of the Soviet Union. Since 1991 the chronically strapped Russian government has repeatedly cut the funding to parks and reserves. The situation is even worse in the successor republics. Financial instability and widescale unemployment have forced peoples and governments throughout the former Soviet Union to focus on problems of more immediate economic concern than nature protection, in many cases on human survival itself. A brief history of protected areas and a few comments about their current plight will illustrate more specifically their environmental functions, long-range and current problems, and prospects for the future.

Troubled Past, Uncertain Future

First on the historical scene were the zapovedniki. From their very inception, however, Soviet authorities played a kind of economic and environmental shell game with the preserves. In theory, they were to be exempt from direct economic exploitation. The tsarist government had set the ex-

Type of designation (number)	Area	Management jurisdiction, objectives, and functions
Zapovedniki (98)	25 million hectares	State Committee of the Environment: maintain as model of nature; preserve native flora and fauna; prohibit economic activity on site; limit entry; conduct environmental monitoring and scientific research
Zakazniki (over 1500)	10 million hectares	Various federal and local agencies: protect specific flora and fauna; temporarily prevent economic activity on site; limit entry; conduct environmental monitoring and scientific research
Nature Monuments (about 2000)	Several thousand hectares	Various federal and local agencies: protect areas of biological, geological, and cultural significance; protect scenic landscapes; conduct scientific research
National Parks (32)	Over 5 million hectares	Federal Ministry of Forestry: protect some flora and fauna; provide recreation and limited economic uses; consistent with stated protection goals; conduct environmental monitoring and scientific research

Table 1. Current management jurisdiction, objectives, and functions of protected areas in the former Republics of the Soviet Union

ample before the Russian Revolution, when, in 1916, it established the first nature preserve in Russia, the Barguzinsky Zapovednik on Lake Baikal (see Figure 1 for the location of this preserve and others mentioned in this article). The major purpose of this preserve was to protect the Barguzin sable, which had very nearly been hunted to extinction during the four centuries before the Revolution. After the Bolshevik Revolution of 1917, the new Soviet government, prompted by naturalists and biological scientists, added dozens of zapovedniki, in all of the major biogeographical regions of the USSR—the tundra, the taiga, the mixed-forest transitional zones, the steppe, the desert, and the mountainous areas of the south.

The zapovedniki, hailed by authorities as "great natural treasures" in an emerging system of protected areas, theoretically served as ecological models (*etolony*)— "standards of nature" by which human impacts on similar ecosystems could be measured. Surrounded by protective buffer zones, the zapovedniki were to be set aside, inviolable for scientific investigation and environmental monitoring only.

At first scientists and naturalists were able to convince Soviet authorities that the nature preserves should be exempt from all economic activities and from tourism of any kind. (Loosely translated *zapovednik* means "forbidden area".) It is important to note, however, that even Soviet scientists were not interested in "preservation for the sake of preservation." They wanted to study the environments of the *zapovedniki* so that they could determine what would be best for the "rational use of resources" in the future. They saw themselves as scientific workers for the national economy. As it turned out the Communist Party and Soviet economic ministries in Moscow had more immediate plans for the protected areas.

During "the great economic surge forward" in the 1930s and 40s, economic ministries routinely violated the integrity of the nature preserves in their frantic search for resources to feed the crash program of industrialization mandated by the Party. Comrade Josef Stalin, dictator of party and state, boasted about a "great transformation of nature" that would assure Soviet citizens a "radiant future of economic plenty."

In the 1950s Stalin and his successors simply removed many preserves from protective status to meet the needs of the postwar economy, ever bent on maximum industrial growth regardless of environmental costs. Not until the late 1960s were these now ecologically shattered preserves restored to the system of protection. By 1991 the system had recovered somewhat from the great transformation of nature. The governments of Russia and the other successor republics pledged in the 1990s to preserve the system and steadily added to the number of preserves, though many of these new *zapovedniki* were but designations on a map.

The national parks, in contrast to the nature preserves, have a rather short history. Only recently were the parks developed. Most of the parks were just beginning to organize in the late 1980s, when the Soviet Union fell apart. As with the *zapovedniki*, central governments of successor republics continued to add paper parks, which are at present poorly funded, if at all, and highly vulnerable to local economic pressures.

Parks share with the *zapovedniki* some of the same goals of research and protection, but they are open to tourism and "limited rational use of resources." In fact, many are located close to large urban areas, so that local citizens can utilize what natural amenities they can find in the parks. In many cases, national parks surround *zapovedniki*, and are supposed to buffer them from direct economic usage. Samarskaya Luka National Park at the Samara bend of the Volga, for example, surrounds the Zhigulevsky Zapovednik.

Over the last 75 years, the Soviet government and its successors also created over 1500 zakazniki, or special purpose reserves. Usually much smaller than the zapovedniki, zakazniki temporarily protect specific game species, threatened complex ecosystems, colonies of birds, or populations of rare plants. They range in size from 0.5 to 6,000,000 hectares. Zakazniki are some-



Figure 1. Protected areas in the republics of the former Soviet Union mentioned in this issue: (1) Barguzinsky Zapovednik; (2) Samarskaya Luka National Park; (3) Zhigulevsky Zapovednik; (4) Sikhote-Alin Zapovednik; (5) Zeysky Zapovednik; and (6) Volga-Kama Zapovednik. Map by Parvina Shamsieva.

times elevated to the more permanent and exalted status of *zapovedniki*.

Another important protective designation is "Nature Monument." Nature monuments might preserve unique biological objects, geological formations, and scenic landscapes.

The Soviet government had centralized the management of the whole system of protected lands and controlled the budgets of each unit, although parks and preserves were under the authority of different ministries. Nominally, the federal governments of the successor republics still control the management and budgets of the protected areas within their jurisdictions. Effectively, however, they have relinquished much authority over the areas to local governments, largely because they can no longer afford to pay for them.

Galloping inflation and plummeting revenues in the 1990s have reduced the never too generous fiscal allocations from the federal governments for parks and preserves to a mere pittance. Administrations of parks and reserves from around the former Soviet Union report drastic reductions in their budgets, in many cases as much as 90%. Some at present report that they have received no monies from their federal governments in over a year, and what little others receive routinely comes late by many months.

The fiscal crisis of the Russian federal government has forced desperate park and preserve administrators to go hat in hand to local authorities, international environmental organizations, and in some cases to the new business elite, who make contributions in exchange "for future considerations." Bribery and graft in such an atmosphere is not at all uncommon.

The current economic crisis in Russia and the other successor republics has thus seriously undermined the mission and purpose of the whole system of protected lands. Directors of zapovedniki and parks cannot afford to hire experienced scientific workers to continue needed research nor rangers to protect the plants and animals of their areas from poachers. Poachers and the directors of surrounding agricultural and industrial enterprises bribe officials and rangers of protected areas to allow them access to park and preserve resources. Such was the case, for example, in the Sikhote-Alin Zapovednik, where poachers killed in the mid-1990s as many as 60 Siberian tigers per year (out of a population of about 450) for the highly profitable traditional Chinese medicine market network.

At present in Russia the Federal Ministry of Ecology nominally oversees the preserves, while the Federal Ministry of Forestry "manages" the national parks. The reach of these federal agencies is currently so weak and federal laws governing protected lands so vague, however, that local authorities largely do as they like with the parks and preserves within their territories. In many cases, moreover, local residents, particularly farmers and directors of economic enterprises surrounding protected areas, resent them because they "lock-up" resources. The current economic crisis exacerbates this resentment. Many local governments, not surprisingly, tend to take the "local point of view" and tacitly encourage the direct economic exploitation of resources within parks and preserves.

Pressured by local authorities and sometimes bribed, park and preserve officials have not uncommonly allowed large illegal in-holdings for animal husbandry and agricultural activities, hard to resist in these bad economic times. Local political leaders and wealthy members of the new Russian business elite alike covet protected lands with scenic vistas as sites for their private summer homes (dachas). National parks, such as the parks on Lake Baikal, are particularly vulnerable to this kind of privatization. Are park officials accomplices in this land grab or are they simply powerless to prevent it? Each park has its own particular horror stories.

Nor are the precious *zapovedniki* immune from such treatment. Local officials condemn preserve lands for public utilities, as in the Zeysky Zapovednik in Siberia, or fail to prosecute poachers, polluters, or private economic users of these public lands.

The recent record of nature protection in the other former republics of the Soviet Union is no more encouraging. The governments of Central Asian republics have thrown open their preserves and parks to wealthy foreigners for trophy hunting of endangered species such as snow leopards, antelope, and mountain goats. In 1995 an Arab Crown Prince, for example, paid \$30,000 to kill a snow leopard and \$6,000 each for several saiga antelope.

The future of protected areas in Russia and the other successor republics thus seems not only uncertain but grim. Given continued economic woes the pressures to privatize these areas will probably grow. Prompted by domestic and foreign resource-based combines, the race to exploit Siberia, the world's last relatively untouched resource frontier, is on. Even though Russian federal land and forest laws prohibit privatization of natural resources without express permission, local officials and economic enterprises are selling off or "leasing" national forest and mineral resources at an alarming rate, a practice which the central government is at present powerless to stop. If this process continues it will certainly gnaw away at the preserves and parks or indirectly affect their threatened ecosystems "downstream."

Even if protection-minded local officials and citizens organize to prevent the mass process of privatization, as in some areas they have, perplexing problems remain. Russian wages have drastically declined and unemployment has greatly increased, especially in the countryside. Ordinary people in all the republics are more or less constantly on the forage to supplement their meager incomes, if such they have at all.

Considering these dire economic circumstances, who can blame hungry poachers for invading parks and preserves or rangers, not paid in months, for allowing them to do so? Or who cannot be at least somewhat sympathetic with grossly underpaid park and preserve officials who accept bribes to look the other way, while commercial poachers take endangered species worth thousands of dollars or rich local businessmen and officials "illegally" build dachas inside protected areas. (Only selfrighteous environmentalists from wellheeled countries, this author suspects.)

What Should Be Done?

In September of 1998, 82 of the 98 zapovednik directors and representatives of 20 interested non-governmental organizations in Russia assembled in Abakhan (Khakasia Republic) to discuss their common problems and the future of Russia's natural treasures. The major theme of their discussions was "Preserving Zapovedniki in Russia's

Current Socio-Economic Situation." Recognizing that their tasks were so daunting and complex as to require united action, they created a national association to address their common problems. They agreed to promote better coordination between federal and local agencies responsible for environmental protection, monitor environmental legislation, increase public awareness about the importance of zapovedniki through environmental education programs, better coordinate their efforts with federal and local prosecutor offices, improve management practices, and, most importantly, seek more reliable sources of funding, from international agencies if necessary. They called as well on the federal government to reassert its authority over protected areas.

Only massive infusions of money, from whatever source, and much greater support from the federal governments are likely to save the protected areas of Russia and the successor republics. The work of local nongovernmental organizations is important for raising money and public consciousness, but they do not at present possess the political or prosecutorial might to protect the preserves and parks. Only the federal governments potentially have that kind of power. Local authorities, with laudable exceptions, seem at present indifferent to nature protection, while some actively encourage the pillage of public lands, protected areas included.

Funds from eco-tourism, international financial institutions such as the World Bank, and international environmental organizations will certainly help for a time. Ultimately, the peoples and governments of the successor republics must supply the political will and funds to save protected areas. And yet it seems highly unlikely that they will be able to do so until some semblance of political and economic stability returns to Russia and the other republics of the former Soviet Union.

Park and preserve officials, in the meantime, should work more closely with supporting environmental groups and other non-governmental organizations to raise funds and promote greater public awareness of the important roles that protected areas play in preserving their natural heritage. They must temporarily accept funds and support from local authorities, but be very wary about possible strings attached. Most importantly, they must promote better relations with nearby local populations, which could possibly be turned into allies. Environmental education programs, which involve local school children in field practices on the *zapovedniki* and parks, would be a positive step in that direction. Some *zapovedniki* have already begun to sponsor such programs.

Continued privatization of public lands and localization of power could mean the eventual demise of parks and preserves as protected areas. How ironic this would be if it occurs as paper parks and preserves proliferate only on maps. There is an old story that Russians like to tell about a wellmeaning group of government officials who raise a great deal of money for a certain benefit and then spend it all on a banquet celebrating the cause. Or then there is the old Russian peasant saying that illustrates this irony more directly: "the fruit grows bigger as the seed becomes rotten."

Address correspondence to Thomas B. Rainey, Member of the Faculty, The Evergreen State College, Olympia, WA 98505; (fax) 360-866-6794