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Article***33 LEAVE IT TO THE SCIENTISTS! AN EXAMINATION OF RUSSIAN ENVIRONMENTAL POLICY-MAKING**Elizabeth Barrett **Ristroph** [\[FNa1\]](#)Copyright (c) 2005 Environmental Outlook Journal; Elizabeth Barrett **Ristroph**

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*35 Introduction

While industrial development in the United States (U.S.) and the Union of Soviet Socialist Republics (U.S.S.R.) progressed at different rates, the devastation this development wrought upon the environment became apparent around the same time. The 1969 Cuyahoga River fire in Cleveland, Ohio, [FN1] was a seminal event in the American environmental movement as it spurred the passage of what is now known as the Clean Water Act. [FN2] Across the Atlantic Ocean, the polluting of Russia's Lake Baikal [FN3] led to an awakening of the Soviet environmental conscience. [FN4] However, while concern for the environment was evident by both cold war adversaries in the 1960s, the results they achieved were quite different.

This article will discuss how scientists and the Russian public have joined to produce a distinct system of Russian *36 environmental policy. Part I of this article addresses public participation in environmental decision-making in the U.S. and why such a system is unlikely to develop in Russia. Part II investigates the historical and present role of the scientist in Russian environmental decision-making. Part III describes the role of the Russian public in determining environmental policy. Part IV provides examples of two areas of Russian environmental concern, wilderness preservation and nuclear energy, and how scientists and the public have affected decision-making in these areas. Finally, the article concludes that the time may be right in Russia for resurrecting science-based environmental decision-making.

I. Democratic Environmental Decision-making

A. Environmental Policy and Public Participation in the United States

The U.S. had its first true taste of environmentalism in the early 1900s with the naturalist movement, when President Theodore Roosevelt strengthened the roots of the national park system [FN5] and John Muir helped found the Sierra Club. [FN6] It was not until post-World War II that these “naturalist” tendencies began to clash with the U.S.’s voracious industrial growth. [FN7] But more was needed to significantly affect environmental policy than “naturalist” tendencies. It took an era of cultural revolution, in *37 which the public had lost patience with racial discrimination, Vietnam, and the idea of growth and development at all cost. [FN8] It also required the attaining of an economic comfort level that allowed Americans to feel that they could now embrace the philosophy of a post-industrial society. [FN9]

During this era, Congress responded to the public outcry against environmental degradation in an unprecedented manner, but its method--science-based environmental law [FN10]--did not bring about the desired change. The problem was making the science into law. Once lawmakers established the policy goals they sought to achieve, they faced the difficult task of integrating scientific standards [FN11] in determining how clean was clean; what the protection of a single human life was worth; and how could laboratory results be transferred to the real world.

Congress’s answer was to establish pollution limits based on best available technology standards (“BAT”). [FN12] Once the *38 technology to reduce pollution was in place, permit writers no longer had to confront the problems of the past: “dueling scientists, mounds of impenetrable data, or the pressures of local politics.” [FN13] While technology was not the answer for all pollution problems, it did provide a clear mark for enforcement. Industries had to use BAT or find a way to emit the same amount of pollution that a BAT-equipped system would discharge. [FN14] If there was evidence showing that discharge exceeded the permitted level, the violators could be sued. [FN15]

The American system of public participation gives citizens a voice throughout the decision-making process. The Clean Water Act, along with many other federal environmental laws, allows citizens to sue polluters for violations, even when the government fails to do so. [FN16] This adds public participation to the back end of the environmental decision-making process. And at the front end of decision-making are laws such as the National Environmental Policy Act, which encourage “public involvement in decisions which affect the quality of the human environment.” [FN17]

B. Environmental Policy and the Role of the Scientist in the Soviet Union

Early Russian environmentalism had its roots in Russian culture, which places a “special value [on] the merits of rural *39 life. [FN18] Therefore, the emphasis was on protecting “certain species or areas of natural beauty.” [FN19] Unlike the U.S., the U.S.S.R. never experienced a radical social movement that shifted the environmental focus to pollution control. Instead, environmentalism progressed under the guidance of the highly respected Soviet scientists.

Because the Academy of Science was one of richest and most powerful institutions in the U.S.S.R., it wielded considerable power in directing Soviet policy. [FN20] Soviet scientists were willing and able to foster an environmental protection policy as long as it could aid in the goal of scientific research and education. For instance, many scientists strongly promoted the establishment and preservation of zapovedniki (wilderness preserves) because these areas were an object of biological research. [FN21] At the same time, many scientists promoted nuclear development and experimentation because this guaranteed a place for the nuclear physicist. [FN22] To some degree, these differences manifested themselves in rivalries between the different scientific branches, which caused the advancement of conflicting sets of goals: preserving nature and allowing nuclear energy. [FN23]

*40 Of course, the Soviet government did not need a rocket scientist to propose developing nuclear energy. The

U.S.S.R. had a massive land area to develop. [FN24] With fossil fuel reserves difficult to extract in far-away Siberia, [FN25] a population in Europe, [FN26] and lots of disposable land in between, [FN27] nuclear energy seemed like a logical course of action. The desire to preserve nature could survive nuclear development because preservation did not directly conflict with Communist ideology. [FN28] In fact, the Soviet regime held the “anthropocentric belief” that although the economy was growing and industrialization continued, the environment could still be protected. [FN29] In a jab at free market economies, Communists embraced the opinion that environmental problems existed only in capitalist countries, where pollution resulted because private businesses forced the public to bear their costs. [FN30]

The true Communist theory of public ownership and control never came to pass in the U.S.S.R. Instead, the U.S.S.R.'s totalitarian decision-makers were separated in time, space, and social status from those who would have to ultimately bear the costs of environmental problems. [FN31] Passing these environmental costs to its citizens was made easier by the U.S.S.R.'s enormous land mass. [FN32] The government of the U.S.S.R. was so insulated from criticism that those who could see the environmental damage and were concerned about these costs had little recourse. [FN33] The bureaucracy of the Soviet planned economy, with *41 its emphasis on meeting production quotas, ensured that information on environmental violations never made it to environmental oversight agencies. [FN34]

C. The Role of the Scientist in Russia

The importance of science has changed dramatically with the fall of U.S.S.R. Far from the Soviet life of luxury, scientists now earn about \$100 a month, somewhat lower than an office clerk's salary. [FN35] A great majority of scientists have left Russia for good, [FN36] and fewer and fewer students choose to prepare for a career in science. [FN37] Many scientists blame the rise of Russian President Boris Yeltsin [FN38] for this change, [FN39] although there are clearly a number of factors at play. With the fall of the Soviet Union, some of the Soviet fixation on science has faded. [FN40] At the same time, younger Russians have absorbed many of the materialistic traits of Western culture [FN41]--traits that do not inspire them to *42 spend their lives in laboratories for monthly salaries of \$100.

D. Some Factors that Weigh Against Democracy in Russia

While environmental law and policy do not have to be tied to democracy, the American model has married the two. The efficacy of procedural laws like NEPA depends on transparency, public participation, and judicial review. [FN42] Thus, when these laws are transferred in identical form to other countries, they do not work without the accompanying “democratic factors.” Despite the break-up of the Soviet Union, Russia is, and always has been, much more of a totalitarian state, with the legacy of a planned economy. [FN43] Even today, Russians are accustomed to a highly centralized government. [FN44] President Vladimir Putin has emerged in an arena not so different from the one in which Stalin emerged. [FN45] Like the U.S.S.R. under Stalin, Russia currently is struggling to redefine itself and make economic progress. [FN46] It is *43 ripe for the leadership of a powerful man who is ready to accumulate vast amounts of control in the face of an economically defunct system. [FN47] Aside from moves to dismantle presidential term limits and capture the media, [FN48] President Putin has consolidated power with respect to environmental matters by eliminating the State Committee for Environmental Protection. [FN49] He transferred its functions to the Ministry of Natural Resources, [FN50] which includes among its mission the “supervision over geological exploration and prospecting and production.” [FN51] While Putin later admitted that this transfer was a mistake, many environmentalists perceive this admission as clever rhetoric. [FN52]

The culture that has grown around the principle of a strong, centralized government is dualistic: Russians are conformists, [FN53] *44 and at the same time they are mistrustful. [FN54] Inasmuch as Russians tend to conform to general-

ized societal expectations, they are less inclined than their Western democratic counterparts to initiate local, grassroots environmental groups. [FN55] This is different from the U.S., where these groups are the backbone of the environmental movement. [FN56]

Rather than viewing democracy as a political process in which the public participates, Russians perceive democracy as a type of regime in which the public acquiesces to what it considers fair. [FN57] Particularly for older Russians, this “regime” arose simultaneously with chaos and a loss of security. [FN58] For this reason, many Russians are far more likely to trust an autocratic figure such as Putin. [FN59]

*45 At the same time, Russians mistrust the government as well as each other. [FN60] With this mistrust comes a sense of fatalism and nihilism, such that Russians feel they have little control over their public officials and their environment. [FN61] This attitude, which seems to have increased with the post-USSR economic despair, leaves no room for environmentalism. [FN62] It has been suggested that without the financial resources to enforce its environmental laws, Russia's only alternative in enforcing these laws is “voluntary citizen compliance and action.” [FN63] This seems unlikely when, due to a lack of “faith in their legal system, there is little self-restraint in the [private] taking of Russia's natural resources.” [FN64] When people are truly apathetic, concern for future generations, the public health, or any other ethical appeal cannot motivate environmentalism.

II. The Role of the Public in Russian Environmental Law and Policy

A. Right to Information

One of the keys to success in American environmental policy is the right to access information under right-to-know laws, [FN65] as well as in governmental decision-making procedures. For instance, NEPA regulations require that the Environmental *46 Protection Agency request public comments so citizens can have a voice in the decision-making process before a final environmental impact statement (“EIS”) is prepared. [FN66] This policy is not the same in Russia where no procedure for law-making has ever been so transparent. [FN67] Nevertheless, like most developing countries hoping to garner favor with international lending organizations, [FN68] Russia has amended its laws to allow for public access to information. [FN69] The most important of these laws, the Law on the Protection of the Natural Environment (“LPNE”), was promulgated in December of 1991. [FN70] This law allows *47 individuals and non-governmental organizations (“NGOs”) to demand information from the government of the Russian Federation concerning the environment and to be involved in the decision-making process. [FN71]

Russia also has a federal information act (“Information Law”), adopted in January 1995, which provides the state with a legal means to collect information from various sources, including citizens, state agencies, and organizations. [FN72] In turn, these same constituencies may request information without having to assert a reason. [FN73] The information law also provides for judicial review of any denial to information. [FN74] Access to the following information must not be limited: laws establishing the legal status of state agencies; laws on citizens' rights and freedoms; information concerning a broad range of emergency situations that affect the safety of the general population; budget information for state and local agencies; and documents accumulated in open collections, such as libraries or archives, which are of public interest or necessary for implementing citizens rights, freedoms, and obligations. [FN75] Other types of information, however, are prey to being categorized as either “state secrets” or “confidential information” to which there is limited access. [FN76]

State secrets are a frequent point of controversy between environmental groups and the government. For instance, in 2002, the Russian Federal Security Service (abbreviated in English as FSB) raided and searched the offices of an environmental group, Baikal Environmental Wave. [FN77] FSB seized maps showing areas around the Angarsk uranium enrichment facility that were contaminated by radioactivity. [FN78] The FSB *48 threatened to press charges of disclosing state secrets against “those who supplied the secret information . . . to the environmentalists.” [FN79]

In November of 2003, a Russian State Duma deputy ordered the detention of environmental activists who were distributing flyers to a theater crowd. [FN80] The flyers had information on which deputies had voted for importing spent nuclear fuel to Russia. [FN81] There is also the case of Aleksandr K. Nikitin, “a former submarine officer and nuclear safety inspector turned environmentalist,” who was charged with treason for assisting the Norwegian environmental group, Bellona, in exposing nuclear safety issues concerning the Russian Northern Fleet. [FN82]

In an important victory for environmentalists, Bellona won the right to have its access-to-information suit heard by a Moscow court. [FN83] Bellona sought to have information about accidents aboard Soviet Era nuclear submarines declassified. [FN84] Problematically, the Presnya District Court claimed that only the Moscow City Court could hear cases on government secrets, while the Moscow City Court stated that the suit did not fall *49 under its jurisdiction and sent the case back to the Presnya District Court. [FN85] Finally, in December 2003, the Supreme Court ruled that the subject matter of the claim bore no relation to state secrets, which paved the way for the case to be heard by the Presnya District Court. [FN86]

These cases suggest that while Russia does have a functional Information Act, there is a heavy veil around what the Russian government classifies as state secrets. Litigating environmental groups have pushed the limits as to what can be kept behind the veil.

B. Right to Participate in Environmental Decision-Making

In the United States, strong procedural provisions often bridge gaps in substantive environmental law. For instance, while public opinion cannot stop a development project from going forward, the public does have the opportunity under NEPA to comment on the draft EIS before it is finalized, [FN87] and can also seek judicial review to ensure that NEPA procedures were properly followed. [FN88] Public outrage and the embarrassment factor each play a role in government decision-making. The EIS procedure is another American approach to environmental problems that does not transfer well to a closed society, despite that Russia's counterpart, the State Ecological Expert Examination (“EEE”), could provide such an extra layer of protection. [FN89] Like many aspects of Russian environmental law, the EEE uses science to defend the environment. [FN90]

Until President Putin eliminated the Ministry for Protection of the Environment and Natural Resources, experts from this agency were responsible for conducting ecological examinations *50 based on information provided by proponents of major projects. [FN91] The projects should conform to environmental laws, be compatible with the environment, and provide ecological safety measures. [FN92] Experts have four months to evaluate a proposed project and decide whether it should proceed. [FN93] If over one-third of the commission rejects the project, the commission shall be given more time to make further proposals with the assistance of “additional experts[.]” [FN94]

The EEE process allows for some public participation. Citizens and voluntary organizations concerned about the environment can propose a public EEE if it “affects the interests of the population,” or they can propose their own approach to the “ecological aspects of the planned . . . activity.” [FN95] State experts are obligated to study all public proposals when preparing an EEE and when reaching a decision on the EEE. [FN96] Public entities can conduct their own EEEs

and in so doing, will be entitled to view the same documents that were submitted to the state, and they will be entitled to have their representatives attend sessions of the state ecological expert commissions. [FN97] However, like the Information Law, the Law on Ecological Examinations comes with the qualification that public interest environmental groups may not conduct EEEs on projects that involve a “[s]tate, commercial and other secret protected by law.” [FN98]

The EEE is a significant step towards putting the public, or at least well-funded and influential NGOs, on the same level as the scientists conducting the EEEs. However, like the Information Act, EEEs retain the veil of secrecy around information that the government does not want to make available to the public.

*51 C. Judicial Review

The right of judicial review over actions of U.S. government agencies was created under the Administrative Procedure Act of 1946 [FN99] (“APA”) and incorporated indirectly into NEPA in *Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n.* [FN100] Federal environmental laws since NEPA have incorporated citizen suit provisions that allow citizens to enforce laws where the agency in charge fails to do so, provided that the citizen can demonstrate an interest in the subject matter of the litigation. [FN101] Without this sort of protection, NEPA would be toothless. Courts in other countries with NEPA-like laws have taken note of this, and as a result some have judicially created their own APA-style veto. [FN102]

*52 Citizens in Russia have similar judicial protections through the Constitution of the Russian Federation and the Law on Protection of the Natural Environment. [FN103] The Constitution provides that “[e]veryone shall be guaranteed protection of his or her rights and liberties in a court of law.” [FN104] Three articles of the Law on Protection of the Natural Environment also refer to a process of judicial review. Article 11 allows judicial review to result in compensation where the public health has been harmed as a result of pollution. [FN105] Article 56 provides that activities that violate international environmental agreements can require that entities either reduce or stop altogether their “use of chemical substances negatively influencing the ozone layer.” [FN106] Finally, Article 13 allows for injunctive relief as a judicial remedy to violations of environmental laws. [FN107]

Environmental litigation in Russian courts [FN108] has been led by Russian branches of international environmental groups, such as Greenpeace and Bellona, [FN109] as well as national environmental *53 groups, such as the All-Russian Nature Protection Society and the Ecojuris Institute. [FN110] In an example of such litigation, Ecojuris Institute contested the Russian government's lifting of environmental protection from “strictly protected ‘First Group’ forest land.” [FN111] This was the first time the Supreme Court of the Russian Federation heard a case against the government that was brought by Russian citizens and NGOs. [FN112] Not only were the decrees in the Ecojuris Institute case issued without environmental impact review, as required, but the agency responsible for preparing the review, the Federal Forestry Service, refused to publicize the documents that specified its plans to reclassify the forestlands. [FN113] Similar to what many agencies in the United States have argued in these types of cases, [FN114] the Russian agency contended that no environmental impact review was necessary since issuing the decrees resulted in no damage to the environment. [FN115]

In bringing suit, the Ecojuris Institute acted on behalf of more than 100 plaintiffs, including national environmental NGOs like *54 the All Russian Natural Protection Society and the Socio-Ecological Union, [FN116] as well as regional groups like the Union of Ecologists of Bashkortostan. [FN117] Numerous state environmental agencies aided Ecojuris, as did the Prosecutor General of Russia. [FN118] Initially, the Russian Supreme Court found that Russian citizens had no right to challenge the government decrees since they were “standard-setting acts.” [FN119] On appeal, the Presidium [FN120] of the Supreme Court agreed with Ecojuris that the decrees had “one-time real world consequences” and re-

manded the case back to the Supreme Court. [FN121]

Despite these victories, the Ecojuris Institute still faced an uphill battle before the Supreme Court as the Court denied many of Ecojuris's expert witnesses to testify. [FN122] Using a bold strategy under Russian law that allows plaintiffs and key witnesses to make closing statements, these advocates put the onus on the Supreme Court when they declared that they had used their constitutional rights to protect Russia's environment and that "citizens and press from across Russia and around the world were watching." [FN123] The strategy worked as the Supreme Court invalidated twelve of the government decrees. [FN124] This was the first ruling handed down by the Supreme Court declaring government action illegal based on Russia's 1995 Law on *55 EEEs. [FN125]

Not all efforts in challenging the Russian government's environmental decisions have been met with success. For instance, Ecojuris Institute filed an action to prevent Exxon from drilling for oil in the Russian North Pacific free of environmental regulations. [FN126] Ecojuris was representing over thirty Russian grassroots environmental organizations as well as local citizens. [FN127] This was the first time that the Russian government's commitment to enforcing environmental regulations was pitted against billion-dollar investment projects. [FN128] International oil companies, including Exxon and Royal Dutch Shell, were seeking to tap into the oil reserves along the Pacific Coast and Sakhalin Island. [FN129] A review of the proposed drilling by the State Committee on Environment found that the amount of expected drilling wastes that would be discharged into these waters would have violated Russian law. [FN130] Prime Minister Stepashin issued a decree that permitted the oil companies to avoid the "zero-discharge" standards that would normally be in place, as well as allow them to discharge the resulting wastewater and drilling mud in violation of Russian federal environmental law. [FN131] The Ecojuris suit was rejected by the Russian Supreme Court in 2002. [FN132]

*56 Most of these cases suggest that including large, well-funded environmental groups and attracting significant media attention will give plaintiffs their best hope of prevailing in the Russian court system.

III. Examples of Divergent Paths of Environmental Decision-Making

This section discusses relevant contributions of scientists to environmental policy-making with regard to zapovedniki, i.e., wilderness preserves, and nuclear concerns. While the philosophy of establishing natural reserves coincides with the goals of scientific research, thus making the need for zapovedniki easy for scientists to defend, the idea of nuclear energy and nuclear waste raises more complex issues. Since the Russian government relies on nuclear energy [FN133] and income from waste processing, [FN134] it has no incentive to fund scientists who preach the dangers of radiation. This has resulted in many scientists feeling hesitant to speak out against nuclear energy and waste processing. [FN135] At the same time, to the extent that nuclear issues invoke a great deal of danger and uncertainty for the general public, citizens have spoken out against nuclear power plants *57 and nuclear waste importation. [FN136] In today's Russia, the fact that nuclear energy has prevailed over pollution concerns is probably less a matter of scientific support than of economics. [FN137]

A. Zapovedniki

1. History

Zapovedniki were the brainchild of early Soviet scientists who sought to use these nature preserves as "reference points" (etalony) for pristine ecosystems, unspoiled by human encroachment. [FN138] The first zapovednik was created near Lake Baikal in 1916. [FN139] Less than fifteen years later, there were over twenty zapovedniki encompassing over

one million hectares [FN140] in the former Soviet Union. [FN141] However, Stalin was more concerned about economic development and industrializing the Soviet Union in the late 1920s; thus, further attempts to add millions of new acres under this protective scheme failed. [FN142] In the Ukraine, zapovedniki were put under Moscow's control under the guise of the Commissariat of Agriculture. [FN143] Indicative of the times, the Askania-Nova zapovednik was converted "from a research zapovednik to land for sheep grazing." [FN144]

After Stalin's death in 1953, science lost some of its industrial *58 focus. [FN145] The Soviet Academy of Sciences established a Commission on the Conservation of Nature, which restored the scientific research focus of zapovedniki. [FN146] Numerous environmental laws were passed over the next twenty-five years, which demonstrated the change in attitude by the Russian government on the environment and the preservation of natural resources. [FN147]

2. Present Management

Russia now manages a system of federally protected areas that includes zapovedniki, national natural parks, zakazniki (special purpose preserves), wildlife sanctuaries, and nature monuments. [FN148] Most zapovedniki are true wilderness areas, since no one is allowed in zapovedniki except scientists and rangers. [FN149] This sets zapovedniki apart from the protected areas in most other parts of the world that have recreational purposes. [FN150] Zapovedniki range in size from just over 200 hectares to more than 4 million hectares and 17 zapovedniki have been designated as UNESCO biosphere reserves. [FN151] The vast majority of zapovedniki are managed by the Department of Zapovednik Management, while a handful are still managed by the Russian Academy of Sciences. [FN152] Some zapovedniki have been added since *59 the fall of the Soviet Union, including the immense Gydanski Zapovednik near the Kara Sea, measuring almost 900 thousand hectares, and the much smaller Bastak Zapovednik, encompassing "merely" ninety thousand hectares. [FN153]

In 1995, the Russian Duma promulgated the Law on Strictly Protected Natural Areas ("LSPNA") . [FN154] While the statutory language was decided without much public input, the Russian government itself stepped aside and left much of the drafting to "policy makers, administrators, and academics with long careers in conservation." [FN155] LSPNA has specific goals for zapovedniki management: (1) to protect the biological diversity and maintain the ecosystems of natural areas; (2) to encourage scientific research; (3) to monitor these areas on a national scale; (4) to foster environmental education; (5) to analyze proposed industrial development as it will affect zapovedniki; and (6) to provide training to scientists on the protection of the environment. [FN156] Although article 11 of Russian federal law prohibits zapovedniki from becoming profit-oriented, zapovedniki may benefit financially from any products that bear their image. [FN157] Also, zapovedniki may retain any fines related to zapovedniki violations and may profit from the sale of any confiscated hunting and fishing equipment. [FN158]

Despite these sources of revenue, zapovedniki still lack funds. [FN159] One idea for income is the development of ecotourism. However, this would strongly run against the unique purpose of zapovedniki, [FN160] and would need to encompass a dramatic change in management. [FN161] Currently, armed rangers must escort the *60 scientists into zapovedniki and patrol the areas at all times. [FN162] Clearly, this could not remain if tourists were allowed to enter the preserves. Another source of revenue could come from granting licenses to rent plots of land, natural objects, buildings, or facilities in the zapovedniki. However, with Russia's weak law on monitoring development, [FN163] this avenue of income could also prove to be a disaster.

3. Role of the Public

LSPNA allows for public participation in enforcing zapovedniki protections by enabling citizens to "render assistance to state agencies in realization of the activities of the organization, protection, and use of specially protected natural

areas.” [FN164] Also, state agencies must consider public proposals that stem from this right, and while these suggestions need not be acted upon, this policy does provide environmental advocates a greater voice on decisions affecting zapovedniki. [FN165]

Environmental advocates are more likely to be successful in achieving specific goals when they collaborate with the zapovedniki. For example, a combination of international and Russian NGOs joined forces with several zapovedniki to stop illegal hunting of the Siberian tiger and Amur tiger. [FN166] In addition, zapovednik managers have brought suit on their own against industries whose pollution has caused serious damage within their zapovednik. An example is the Laplandski Zapovednik, which was contaminated for years by a nearby nickel and copper smelting plant. [FN167] The construction of dams and settling ponds to protect downstream resources not only failed to contain the pollutants, but destroyed the hydrology of *61 the wetland area. [FN168] The Laplandski Zapovednik prevailed in its lawsuit and recovered several hundred thousand dollars. [FN169]

Unlike nuclear energy, zapovedniki evoke limited controversy among most citizens. [FN170] Zapovedniki are usually separated from the adjacent lands with “posted” signs and sometimes wire fences. [FN171] The locals know what zapovedniki are and generally stay out. [FN172] Even if the role of public participation is limited, it is unlikely that the goals of the scientists and the goals of the public will conflict. Rather, the maintenance of existing zapovedniki and the designation of new zapovedniki seem to rely only on the economic welfare of the Russian state.

B. Nuclear Policy

1. History

At the opposite end of the spectrum from zapovedniki are nuclear energy, nuclear waste, and spent nuclear fuel reprocessing. The supervision of nuclear waste and nuclear energy is not a priority in a country struggling with economic recovery and development. [FN173] Russia's current focus seems to be on maintaining and generating nuclear capacity, rather than on assuring reactor safety or safe disposal of nuclear waste. [FN174]

Military activity in the U.S.S.R. helped to contribute to an extensive nuclear waste problem due to “indiscriminate dumping, *62 intentional bombing, and reactor accidents.” [FN175] Similar to the United States, which was the first to ocean-dump nuclear waste materials from its submarines, [FN176] the U.S.S.R. began ocean-dumping its waste in 1959. [FN177] By the 1960s, the dumping of radioactive waste into Northern and Far Eastern oceans by the U.S.S.R. was a common practice. [FN178] While some Russian companies ceased dumping such waste in the mid-1980s, [FN179] the Russian Navy had not yet ended the practice, even by the mid-1990s, due to a lack of funds “to build disposal facilities on land.” [FN180]

Siberia is another dumping ground for nuclear waste. [FN181] Since registration of waste burial did not start until 1980, [FN182] scientists today cannot definitively locate nuclear burial sites near the Siberian steppes, which allegedly house over 500,000 tons of radioactive waste currently contaminating nearby rivers and groundwater. [FN183]

The operation of nuclear power plants worldwide has been on the rise since the 1960s. [FN184] Since most of the U.S.S.R.'s population was located in Europe, and more than eighty percent of its fossil fuels were in Siberia, the U.S.S.R. adopted nuclear energy as a solution to the nation's energy problems. [FN185] Electricity generated by Soviet nuclear power doubled nearly *63 every year between 1965 and 1985. [FN186] During this rapid development, Soviet nuclear planners emphasized standardizing nuclear plants rather than creating safety standards on a level consistent with that achieved by the West. [FN187]

2. Present Management

The Russian Ministry of Atomic Energy (“Minatom”) oversees “nuclear safety, research and design, the modernization of the industry, and the conversion of military facilities to civilian purposes. [FN188] The Rosenergoatom branch of Minatom has the responsibility of operating most Russian nuclear power plants, including plant maintenance, repair, and emergency planning. [FN189] Responsibility for overseeing all civilian nuclear power plants rests with Gosatomnadzor, which inspects all nuclear power plants, issues licenses for all nuclear facilities with a civilian purpose, and sets the rules for the handling of radioactive waste. [FN190] Like the former U.S. Atomic Energy Commission (“AEC”), [FN191] Minatom has the conflicting responsibilities of “operations supervision and safety oversight.” [FN192]

The requirement that an environmental impact statement be filed prior to the issuance of major construction permits for nuclear facilities is a weak safeguard. [FN193] Indeed, a presidential order waives this requirement for construction in either sparsely populated or financially disadvantaged areas of Siberia. [FN194]

***64** The issue that has generated the most controversy in recent years is the Russian government's plan to import nuclear waste. [FN195] In 1999, Minatom lobbied the Russian State Duma to amend the Law on Protection of the Natural Environment that had once effectively banned the importation of “radioactive materials” into Russia. [FN196] The amended law generally prohibits the importation of radioactive wastes but allows “irradiated nuclear reactor fuel elements” to be imported subject to State Environmental Expert Examinations. [FN197] An amendment to the Law on the Use of Atomic Energy sets forth guidelines “under which Russia can lease spent nuclear fuel to other countries.” [FN198] This amendment allows for the return of Russian leased fuel that foreign countries have burned in their reactors. [FN199]

Despite public protests, Russia commenced the import of spent nuclear fuel in late 2001. [FN200] The Ministry of Atomic Energy ***65** promised that funds raised from reprocessing spent nuclear fuel would be used to further develop Russia's nuclear energy sector and to reprocess domestic nuclear waste. [FN201] The Russian government has certainly kept its promise with respect to developing its nuclear energy sector: between 1999 and 2003, the amount of electricity generated in Russia by nuclear energy climbed from 14.4% to 16.4%, a fourteen percent increase in less than five years. [FN202]

The explosive growth of the nuclear industry has prompted environmental groups to take legal action. In 2001, Greenpeace filed a lawsuit to combat the Russian government's decision to increase the number of nuclear reactors and argued that any proposed increase must come from the Federal Assembly and that the necessary State EEES need to be made. [FN203] Representatives of the Ministry of Atomic Energy, the Ministry for Protection of the Environment and Natural Resources, and the Ministry of Economic Development prevailed in their argument that their decision had been approved under the federal target program of 1998. [FN204]

In 2004, the Ministry of Atomic Energy launched a project to design a new high-capacity nuclear reactor with a capacity of 1500 megawatts. [FN205] The Ministry foresees losing 30,000 ***66** megawatts of power by the end of the decade due to the expiring lifetimes of conventional nuclear reactors. [FN206] With estimated construction costs of \$1.3 billion, the new reactor is not expected to be built until 2013, and will replace the nuclear facility in St. Petersburg. [FN207]

All of these developments suggest that in spite of public opposition, the Russian government will continue its historical movement toward the increased use of nuclear energy, and nuclear waste may develop into an economically profitable industry for Russia.

3. The Role of the Public

Public protest led by environmental groups does not seem to have influenced Russian policy-making on nuclear affairs. [FN208] The fact that scientists have not taken a strong position against nuclear proliferation only hinders anti-nuclear efforts.

In fact, some scientists actually suggest that public fear of nuclear activity is problematic. For instance, in a recent interview, Scientist Nikolai Laverov voiced his approval for transporting spent nuclear fuel into Russia for reprocessing and storing spent nuclear fuel. [FN209] He cautioned against caving in to pressures brought on by environmental organizations, and was concerned that Russia was losing out on billions of dollars in revenues from this market in nuclear waste. [FN210] Also, he argued that consolidating the nuclear waste industry into the hands of a few countries would keep a hold on the proliferation of nuclear technologies and weapons. [FN211] Mr. Laverov points out that Russia is not alone in importing nuclear fuel as both France and Great Britain do so with far less fanfare. [FN212]

Other scientist-commentators have expressed concern that the public's fearful reaction to nuclear energy following Chernobyl [FN213] *67 will remain "a stumbling-block" for the population on all future issues concerning nuclear engineering. [FN214] These scientists blame the mass media for misinforming the public, which is reinforced among young people in their ecology textbooks. [FN215] They note that journalists claim the number of Chernobyl-related deaths, immediately after the event and in the years following the nuclear meltdown, measure in the hundreds of thousands, even though scientific journals and organizations put this tragic figure at far less. [FN216] These scientists advocate a state information policy on nuclear issues that relies on scientific professionals who are able to communicate their technical knowledge at a level that the public can understand. [FN217] To combat misinformation, the Russian Academy of Science plans to target physicians as intermediaries in a public dialogue about the danger, or lack of danger, from nuclear energy based on the assumption that people trust their doctors more than technical experts. [FN218]

The Russian Academy of Science will have a lot of work to do, considering the extent to which past nuclear mistakes tend to stick around. Chernobyl, although no longer part of the Russian jurisdiction, is an unsettling reminder. Currently, the sarcophagus used to cover the exploded reactor, which was erected in the emergency conditions following the catastrophe, is in a state of disrepair. [FN219] As most of the "liquidators" who helped build the original sarcophagus are dead, [FN220] convincing new *68 liquidators to enter the zone will not be easy.

Conclusion

As the esteem of scientists has decreased, and the influence of the West has increased, environmental decision-making in Russia has the potential to change hands. First, the normative base for public participation has increased with the Law on the Protection of the Natural Environment and the Law on Specially Protected Natural Areas. [FN221] Environmental groups are beginning to test their rights to judicial review under these laws and, in a few cases, they have been successful. [FN222]

Second, some of the interests of scientists are polarized from the interests of environmental groups. The groups who brought the suits discussed in this article were national and international NGOs rather than concerned scientists, although, certainly, there are scientists in these groups. [FN223] While scientists once led much of the environmental movement, many scientists today express mistrust of environmental organizations, and the idea of the greening of Russia at the expense of more scientific forms of decision-making. Additionally, a large number of scientists have found themselves out of a respectable job or have decided to leave the country for good. [FN224]

These changes do not guarantee a more participatory model of environmental decision-making. Environmental activists in Russia do not and cannot act with the same force with which *69 they might act in the West. Russian activists are

up against a legal system where a huge gap exists between the stated and the actual law. [FN225] In the middle of this gap is a struggling economy, [FN226] Putin's tightening power, [FN227] and a population of Russians who are at times apathetic and mistrustful. [FN228] The use of nuclear energy and nuclear waste import seems to be increasing despite whatever outrage the public has expressed, [FN229] and there is no sign that, under President Putin, the Russian government will change its nuclear policy.

While the U.S.S.R.'s scientific community was not insulated from the government and its nuclear agenda, it had enough prestige and public esteem to make some positive impacts on Russia's environmental conservation policy. [FN230] Today, Russia's public interest groups seem to be competing with Putin's consolidation of power to fill the vacuum of the disintegrating scientific community. [FN231] As this battle plays out, the U.S. should take note, that even with a democratic society and a history of public participation, the U.S. is not completely insulated from the forces of anti-environmentalism that can arise in the absence of a strong and independent scientific community.

Professor Oliver Houck notes that American "academics in the *70 sciences receive their salaries and technical support through grants and outside funding, nearly a third of it from industry." [FN232] Without the benefit of Russian mistrust, the American public is often unaware of the source of this money. Additionally, American scientists are also affected by political agendas as "an increasing number of scientists are being pulled off of studies, sanctioned, and even dismissed for conclusions that contradict the ideology of their bosses." [FN233]

As scientists step away from their lead role in warning the public of potential environmental harm, other forces must somehow acquire that responsibility. Given that environmental law and public participation are often illusory, NGOs may emerge as the most influential force. However, NGOs will face an uphill battle if they do not have the strong influence of science to overcome public mistrust.

[FN1]. Barrett **Ristroph**, also known as Elizaveta Ristrova, is a citizen of Ulyanovsk, Russia, and the United States. Ms. **Ristroph** received her J.D. degree from Tulane Law School. She is currently employed by the Louisiana law firm of Talbot, Carmouche, & Marcello where she is active in litigation against oil companies.

[FN1]. Case Western Reserve University, The Cuyahoga River Fire, June 22, 1969, at <http://www.cwru.edu/artsci/engl/marling/60s/pages/richoux/index.html> (last visited Jan. 27, 2005).

[FN2]. Id. See also Eric Pianin, EPA to Allow Polluters to Buy Clean Water Credits, Wash. Post, Jan. 14, 2003, at A03 (discussing the passage of the Clean Water Act following the Cuyahoga River fire and its focus on requiring "factories and sewage plants to upgrade their anti-pollution technology."). The Federal Water Pollution Control Act of 1972, more commonly referred to as the Clean Water Act, 33 U.S.C.A. §§ 1251-1387 (2001), sought to advance "the development and implementation of waste treatment management plans and practices which will achieve the goals of this chapter." Id. § 1281. This legislative effort occurred between the passage of the National Environmental Policy Act of 1969 ("NEPA"), 42 U.S.C. §§ 4321-70f (2003), and the Resource Conservation and Recovery Act of 1976 ("RCRA"), 42 U.S.C. §§ 6901-6992(k) (2003). Nicholas A. Robinson & Gary R. Waxmonsky, *The U.S.-U.S.S.R. Agreement to Protect the Environment: 15 Years of Cooperation*, 18 Envtl. L. 403, 405 n.1 (1988).

[FN3]. Genine Babakian, Greenpeace Protests Baikal Paper Mill, Moscow Times, Aug. 29, 1996 (referring to the cumulative effects of thirty years of contaminant-dumping by the Baikal Pulp and Paper Mill as "equal to the volume of a city of 500,000" people). The polluting of Lake Baikal, which holds one-fifth of the world's supply of freshwater, was further described as a "30-year symbol of Soviet disregard for its unique environmental treasures." Id.

[FN4]. Scientists attempted to block the original construction of the paper mill. See Babakian, *supra* note 3. Concerned citizens also joined this effort in one of the few demonstrations of pre-glasnost Russian social movements. See also Katherine M. Harman-Stokes, [Community Right-To-Know in the Newly Independent States of the Former Soviet Union: Ending the Culture of Secrecy Surrounding the Environmental Crisis](#), 15 Va. Envtl. L.J. 77, 94-95 (1995) (naming an example of a small “ad hoc” movement in Russia aimed at preventing the building of pollution facilities on Lake Baikal). Id.

[FN5]. Barry Mackintosh, *The National Park Service: A Brief History*, National Park Service, at <http://www.cr.nps.gov/history/hisnps/NPSHistory/npshisto.htm> (last visited Jan. 27, 2005) (noting that before leaving office, President Theodore Roosevelt used the Antiquities Act of 1906 to proclaim eighteen national monuments). Many of these national monuments were later converted to national parks by Congress. Id.

[FN6]. The Sierra Club is an environmental group with its stated goal being “to make the mountains glad.” Sierra Club, *John Muir Exhibit: Introduction to John Muir*, at http://www.sierraclub.org/john_muir_exhibit/intro.html (last visited Jan. 27, 2005) (joining others to form the Sierra Club, John Muir served as its first president until his death in 1914); see also Dyan Zaslow & T.H. Watkins, *These American Lands: Parks, Wilderness, and the Public Lands* 6 (The Wilderness Society 1994) (1986) (stating that Muir “vigorously championed the nascent national park movement”).

[FN7]. Samuel P. Hays, *A History of Environmental Politics Since 1945* 17-21(2000) (describing the rapidly developing U.S. economy after World War II and its impact on the environment). These post-war years were marked by the swift construction of homes and businesses, as well as explosive growth in the transportation industry, and increased development of open areas. Id. at 18.

[FN8]. See generally Victor B. Scheffer, *The Shaping of Environmentalism in America* 16-30 (University of Washington Press 1991) (arguing that the liberation movements and the concurrent environmental movement of the 1960s were drawing members from the same cohort - those who saw “no distinction between injustice to men and injustice to the earth”).

[FN9]. See Amanda L. Davey & Robert L. Vertrees, *Great Lakes Commentary: Comparative Analysis of Stakeholders' Attitudes Toward the Human-Environment Relationship in Two Great Lakes Areas of Concern*, 1999 Tol. J. Great Lakes' L. Sci. & Pol'y 13 (1999) (defining two models, the Dominant Social Paradigm (“DSP”) and the New Environmental Paradigm (“NEP”), in order to explain a shift in how society views the natural world). The components of the DSP are “a belief in limitless resources, continuous progress, the necessity of growth, and faith in the problem-solving abilities of science and technology.” Id. at 14. The NEP, on the other hand, concerns itself with limiting growth, protecting ecosystems, and “securing more harmonious relationships between humans and nature.” Id. For a more in depth comparison of DSP and NEP, see R.J. Dalton et al., *Critical Masses* 197-205 (Russell J. Dalton et. al. eds., 1999).

[FN10]. Oliver Houck, Essay, [Tales from a Troubled Marriage: Science and Law in Environmental Policy](#), 17 Tul. Envtl. L.J. 163, 165 (2003) (listing the “first wave” of environmental laws passed in the United States, including the NEPA, the RCRA, and the Clean Air Amendments of 1970, 42 U.S.C. A. §§ 7401-7671(q) (2003)). These laws were science-based because “[i]t was scientists... who had sounded the [environmental] alarm. They were the ones to put out the fire.” Id. at 165.

[FN11]. Id. at 167 (citing as an example the Federal Water Pollution Control Act and how science could establish “concentration limits for every pollutant”). Inevitably, the question of the water's ultimate use, which inevitably affected the level of pollutants allowed, would need to be answered politically and not scientifically. Id.

[FN12]. Id. at 169-70. “BAT” or Best Available Technology is defined as “the best and most stringent technology, treat-

ment techniques, or other means available for controlling emissions, effluent, waste materials, etc... after considering field, rather than solely laboratory conditions.” RCRC Glossary, Best Available Technology, available at <http://www.rcrc.nm.org/glossary/gl-best-available-technology.html> (last visited Jan. 18, 2005). 33 U.S.C. § 1314 (b)(2)(B) (2003) sets out factors for BAT stating:

Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.

Id.

[FN13]. See Houck, *supra* note 10, at 169-70.

[FN14]. See 42 U.S.C.A. § 7412(d)(2) (2003) (describing the Clean Air Act's mechanism for establishing hazardous air pollutant standards).

[FN15]. See, e.g., 33 U.S.C. § 1365(a) (2000) (granting citizens the right to sue to enforce “effluent standard[s] or limitation[s]” under the Clean Water Act).

[FN16]. See, e.g., 16 U.S.C. § 1540(g) (2000) (allowing citizen suits to enforce the Endangered Species Act); see also 42 U.S.C.A. § 7604 (2003) (allowing similar suits to enforce the Clean Air Act).

[FN17]. 40 C.F.R. § 1500.2(d) (2003).

[FN18]. R.J. Dalton et al., *supra* note 9, at 198.

[FN19]. Id.

[FN20]. The scientists got what they wanted, whether it was laboratory equipment or housing and amenities. Interview with Alma Seitova, former member of the Soviet Academy of Science, Dept. of Microbiology (Feb. 16, 2004) [hereinafter Interview with Alma Seitova].

[FN21]. Scientists took an active role in programs that educated the public about ecology. Interview with Alexander Mateev, former member of the Soviet Academy of Science (March 2, 2004) [hereinafter Interview with Alexander Mateev]. For instance, scientists in Pushchino, the center of the Russian Academy of Sciences, created a program of ecological education with a laboratory designed to educate children about ecology. Id. The laboratory developed an exchange program for international and Russian school children alike to take part in ecological projects. Id.

[FN22]. The Soviet Union's desire for nuclear weapons was a major motivating factor in this development. Federation of American Scientists, Russian Nuclear Weapons, at <http://www.fas.org/nuke/guide/russia/nuke/index.html> (last visited Jan. 30, 2005). World War II demonstrated to Stalin how far behind the Soviet Union was in nuclear weaponry compared to other nations and so he increased financing for military research and development. Id. This led to increased funding for Soviet science, including new research facilities and significantly higher salaries and benefits for scientists. Id.

[FN23]. Despite the Communist regime they lived under, the scientific community was not a unified group in the Soviet Union. Jerry F. Hough & Merle Fainsod, *How the Soviet Union is Governed* 396-97 (1979). Soviet scholars in the same field of science could disagree with each other just as much as Western scholars. Id. Also, numerous scientific institutes were under the control of ministries or state committees that had their own agenda which they sought to advance. Id. Providing scientific support for these agendas was part of a Soviet scientist's job. Id.

[FN24]. While it existed, the U.S.S.R. was the world's largest country. The Encyclopedia Americana: International Edition 378 (Grolier Incorporated 1981) (1829). The U.S.S.R. was over twice the size of the United States, stretching across eleven time zones and occupying one-seventh of the world's land surface. Id.

[FN25]. Id. at 428.

[FN26]. Id. at 378.

[FN27]. Id. at 380 (noting that about seventy percent of the Soviet Union was uninhabited by humans and “unsuitable for farming” mostly because of its severe climate).

[FN28]. R.J. Dalton et al., supra note 9, at 198.

[FN29]. Id.

[FN30]. Marshall I. Goldman, Environmentalism and Nationalism: An Unlikely Twist in an Unlikely Direction, in The Soviet Environment: Problems, Policies and Politics 1 (John Massey Stewart ed., 1992).

[FN31]. See Harman-Stokes, supra note 4, at 78-79.

[FN32]. Id. at 85.

[FN33]. See generally Jason H. Eaton, [Kicking the Habit: Russia's Addiction to Nuclear Waste Dumping at Sea](#), 23 *Denv. J. Int'l. L. & Pol'y* 287, 297 (1995) (noting that even with more than 1000 environmental laws on the books in the U.S.S.R., these laws were ineffective and ignored because they contained no means of enforcement) (citation omitted).

[FN34]. Kathleen M. Maloney-Dunn, [Russia's Nuclear Waste Law: A Response to the Legacy of Environmental Abuse in the Foreign Soviet Union](#), 10 *Ariz. J. Int'l. & Comp. L.* 365, 375 (1993).

[FN35]. Interview with Alma Seitova, supra note 20.

[FN36]. Id. Ms. Seitova notes that she was the last of twenty-six colleagues in her department to leave, and that all left after the fall of the U.S.S.R. Id. She estimates that two-thirds have left the country. Id.

[FN37]. See Mosnews.com, [How Much Does Russia Cost?](#) (May 21, 2004), at <http://www.mosnews.com/money/2004/05/21/howmuch.shtml> (last visited Jan. 30, 2005). In the 1990s, the majority of scientists left the country to pursue careers in “western universities and scientific research organizations.” Id.

[FN38]. In 1999, Boris Yeltsin became Russia's first popularly elected President until he resigned in 2000. Boris Yeltsin, Encyclopedia Britannica Article, available at <http://www.britannica.com/eb/article/> (last visited Jan. 18, 2005).

[FN39]. Interview with Alma Seitova, supra note 20.

[FN40]. Irina Dezhina & Loren Graham, Working Papers: Russian Basic Science After Ten Years of Transition and Foreign Support, Carnegie Endowment for International Peace: Russian and Eurasian Program 7 (Feb. 2002), available at <http://www.ceip.org/files/pdf/wp24.pdf> (last visited Jan. 30, 2005) (discussing the decline of Russian science after the dissolution of the Soviet Union). This decline was partly due to guilt by association - science had become so intertwined with Soviet ideology that it, too, took a fall when the Soviet Union collapsed. Id. Also, getting new political and economic systems in place were a higher financial priority in post-Soviet society than promoting science. Id.

[FN41]. See generally Erin E. Arvedlund, In Russia, Class for the Masses, N.Y. Times, April 11, 2004, § 9, at 1 (discussing the popularity of Western fashion trends in post-communist Russia).

[FN42]. Bradley C. Karkkainen, [Toward a Smarter NEPA: Monitoring and Managing Government's Environmental Performance](#), 102 Colum. L. Rev. 903, 915-16 (2002) (describing how NEPA proponents see transparency and public participation as crucial to creating widespread acceptance of governmental decisions concerning environmental policy). Compare Matias F. Travieso-Diaz & Steven R. Escobar, [Cuba's Transition to a Free-Market Democracy: A Survey of Required Changes to Laws and Legal Institutions](#), 5 Duke J. Comp. & Int'l L. 379, 421 (1994) (discussing how Cuba, like almost all former communist countries of Eastern Europe, lacks a governmental commitment to environmental protection and fails to enforce environmental laws).

[FN43]. Many Russians, in fact, long for an authoritarian leader in hopes for order and stability, even at the expense of personal liberties. Seth Mydans, Letter from Europe: Give Me Liberty, But Not Too Much: This is Russia, N.Y. Times, Apr. 21, 2004 at A4 [hereinafter Mydans, Letter from Europe].

[FN44]. See, e.g., Steven R. Weisman, Allies Against Terror, Sliding Farther Apart, N.Y. Times, Sept. 12, 2004, §4, at 5 (expressing the concerns of U.S. administration officials regarding President Putin's return to "Russian authoritarianism" in response to recent terrorists attacks in Russia). Such authoritarianism includes "prosecution of dissenters and business leaders, fettering of the free press, [and the] distribution of Russian assets to cronies." Id.

[FN45]. David Holley, In Russia, Power is the Front-Runner: As the Nation Grows Nostalgic for a Strong State, Putin's Backers are Favored in Today's Vote, L.A. Times, Dec. 7, 2003, at A1 (discussing how Putin's United Russia party used images of Stalin as a symbol during the 2003 Russian presidential campaign). Even today, Stalin's image conveys a sense of a strong state that would look after ordinary people. Id.

[FN46]. See generally Ben N. Dunlap, [Divide and Conquer? The Russian Plan for Ownership of the Caspian Sea](#), 27 B.C. Int'l. & Comp. L. Rev. 115, 123 (Winter 2004) (discussing President Putin's negotiations aimed at maximizing Russia's economic wealth and diplomatic influence in the Caspian Sea, where billions of barrels of oil reserves are located); see also Sabrina Tavernise, A Stable Economy, But For How Long?, N.Y. Times, June 17, 2001, §3, at 12 (noting that, in 2001, Russian businesses took a leading role in bringing about economic change through investments and corporate reorganizations).

[FN47]. Robert G. Kaiser, A LOOK AT...Russia's Enigmatic President: Waiting for the True Putin to Emerge, Wash. Post, Oct. 15, 2000, at B3 (discussing Putin's steady accumulation of personal authority in his first five months in office).

[FN48]. See Peter Baker, Familiar Candidates Skipping Russian Presidential Race, Wash. Post, Dec. 31, 2003, at A13 (reporting the pro-Putin United Party's claim that it had enough control of the State Duma to amend presidential term limits); see also Seth Mydans, As Expected, Putin Easily Wins a Second Term in Russia, N.Y. Times, Mar. 15, 2004, at A3 (quoting Secretary of State Colin L. Powell that "to have full democracy... you've got to let candidates have all access to the media that the president has."). President Putin limited press freedoms in his first term. Id.

[FN49]. Forest.ru, V. Putin Signs Decree Abolishing State Committee for Environmental Protection (Goskomekologiya), available at <http://www.forest.ru/eng/problems/control/publication1.html> (last visited Jan. 30, 2005).

[FN50]. Id.

[FN51]. ASMO-Press, Ministry of Natural Resources of the Russian Federation, at ht-

[tp://enc.ex.ru/cgi-bin/n1firm.pl?lang=2&f=1245](http://enc.ex.ru/cgi-bin/n1firm.pl?lang=2&f=1245) (last visited Jan. 30, 2005).

[FN52]. Compare Internet Department of the Presidential Press and Information Office, Opening Address at the Session of the State Council Presidium (June 4, 2003), available at [http:// president.kremlin.ru/eng/speeches/2003/06/04/1308_46764.shtml](http://president.kremlin.ru/eng/speeches/2003/06/04/1308_46764.shtml) (last visited Oct. 30, 2004) (providing President Putin's mea culpa for leaving the ministry, whose mission is to exploit natural resources, in charge of environmental controls), with Rashid Alimov, Putin Urges Reforms in Enviroprotection: Whether Deeds Will Follow Words is Uncertain, June 5, 2003, at [http:// www.bellona.no/en/international/russia/envirorights/info_access/29815.html](http://www.bellona.no/en/international/russia/envirorights/info_access/29815.html) (last visited Oct. 30, 2004) (calling some of President Putin's environmental pronouncements "well-crafted rhetoric").

[FN53]. The author's experience based on her time spent in Moscow and Ulyanovsk suggests that while strangers do not greet or otherwise exchange pleasantries with each other on the streets, they might reprimand each other for having a tag sticking out of their clothing or wearing a shirt inside-out. See also Hans-Georg Heinrich, Russian and Central European Political Culture, in *Political Culture in East Central Europe* 223, 226 (Fritz Plasser & Andeas Pribersky eds., 1996) (noting that it is characteristic of Russian political culture to be intolerant of political dissent). "Democracy and its principle of competition between various views and strategies are disturbing... [to] many Russians, who long for the comfort and security of one 'correct' worldview." *Id.* (citation omitted). The author's experience suggests that failure to conform--even an out-of-place smile--arouses deep suspicion and alarm.

[FN54]. Heinrich, *supra* note 53, at 228 (claiming that Russians reserve trust "for a select group of family members and close friends"); see also Stanley R. Boots, [Observations from Afield: The Tension Between the Goals of Russian Environmental Legislation and Extralegal Factors in the Russian Far East](#), 10 *Int'l Legal Persp.* 201, 232 (Fall 1998) (recounting a noted Russian economist's view that the source of this Russian distrust is based on a strong brand of individualism that is due to "people's disappointment in collectivism").

[FN55]. Revolutions and upheavals in Russia are more often massive events rather than isolated protests. Consider the mass proletariat strikes of the 1890s, the 1905 Revolution, the Bolshevik Revolution, and the massive upheavals accompanying the demise of the U.S.S.R.

[FN56]. See Scheffer, *supra* note 8, at 113 (noting the 1960s environmental movement derived strength from individual citizens who became quite powerful when they all joined forces). While approximately three public conservation groups sprang up annually in the sixty years prior to the environmental movement of 1960, that number increased to eighteen a year in the next two decades. *Id.*

[FN57]. Mydans, Letter from Europe, *supra* note 42 (noting that Russians have "accepted - even embraced - new limitations on their freedoms").

[FN58]. *Id.*

[FN59]. Julius Strauss, Russia Falls at the Feet of Tsar Vladimir: President Putin is Sworn in at an Event More Coronation than Inauguration, *The Daily Telegraph* (London), May 8, 2004, at 15 (noting that the evocation of Russia's imperial tradition at President Putin's 2004 inauguration is uplifting to Russians, even if it implies resting power "in one pair of hands.")

[FN60]. See Heinrich, *supra* note 53, at 228 at 227-28 (observing that Russian society has had periods of "strong and oppressive" governments and governments that "withdrew, decayed and left society largely to itself."). Regardless of the type of regime in place, Russians view their government as mostly concerned with powerful interest groups and

“deserving neither trust nor active support and participation.” *Id.* at 228.

[FN61]. For an example of why this feeling is not misguided, see *supra* notes 49-52 and accompanying text (detailing President Putin's transfer of environmental policy-making from a state agency focused on protecting the environment to a state agency focused on the exploitation of natural resources).

[FN62]. The author's conversations with older Russians suggest that parks and natural areas, in which today's Russians litter wantonly, were much cleaner prior to the break up of the Soviet Union.

[FN63]. See *Boots*, *supra* note 54, at 233.

[FN64]. *Id.*

[FN65]. Robert F. Blomquist, *Environmental Law Practice Guide: State and Federal Law*, Vol. 1 §4.01[3] (Michael B. Gerrard ed., 2004) (stating that public information laws require disclosure by regulated entities to various members of the public, and that these laws are “an integral part of the prevailing American model of command and control environmental regulation”).

[FN66]. 40 C.F.R. § 1503.1(a)(4) (2004). An environmental impact statement is “a document required of federal agencies by the National Environmental Policy Act for major project or legislative proposals significantly affecting the environment.” National Institute for the Environment, Congressional Research Service, *Agriculture: A Glossary of Term, Programs and Laws*, available at <http://www.cnie.org/nlc/AgGlossary/letter-e.html> (last visited Jan. 20, 2005). See also 40 C.F.R. § 1502.1 (2004) (stating that “[t]he primary purpose of an environmental impact statement is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government”).

[FN67]. Frances H. Foster, *Information and the Problem of Democracy: The Russian Experience*, 44 *Am. J. Comp. L.* 243, 251-52 (1996) (explaining how Foster's “informed citizenry theory” has been used as an argument “to open up the Russian lawmaking and decision making processes to public scrutiny”).

[FN68]. The World Bank is an example of an international lending organization. See *The World Bank, A Guide to the World Bank 4* (2003) (noting that the World Bank is composed of five institutions, (1) the International Bank for Reconstruction and Development, which lends to “middle-income and creditworthy low-income” nations (2) the International Development Association, which provides interest-free loans to the poorest countries, (3) the International Finance Corporation, which provides financing to developing countries' private sector, (4) the Multilateral Investment Guarantee Agency, which provides certain guarantees to investors in developing countries, and (5) the International Centre for Settlement of Investment Disputes, which aims to facilitate the “conciliation and arbitration of investment disputes”).

[FN69]. For instance, the Russian Constitution provides that every Russian has the right to acquire and disseminate information in a lawful manner. Konst. RF art. 29, para. 4 (1993), available at <http://www.supcourt.ru/EN/rc.htm> (last visited Jan. 30, 2005); see also Foster, *supra* note 67, at 246 (noting that the right to information has been a constitutional right since the 1978 Constitution).

[FN70]. Law of the Russian Federation No. 2060-1 of December 19, 1991 on the Protection of the Natural Environment [hereinafter LPNE], available at GARANT 10008049. This law enforces Russia's constitutional guarantee of environmental protection (Article 2), lists the rights of citizens with respect to the environment (Article 3), and grants exclusive jurisdiction in regulating environmental protection to the Supreme Soviet of the Russian Federation (Article 5); see also

William E. Butler, Russian Law 516 (1999) (describing the LPNE as “the single most substantial piece of legislation in Russian history on the environment”).

[FN71]. LPNE, available at GARANT 10008049, art. 12.

[FN72]. Federal Law on Information, Informatization, and the Protection of Information, *Sobr. Zakonod. RF*, 1995, No. 24-FZ [hereinafter Information Act], art. 8(1), available at http://www.fas.org/irp/world/russia/docs/law_info.htm (last visited Oct. 30, 2004) The stated purpose of this law is to create effective and efficient informational support to assist the Russian government's decisions affecting Russia's social and economic development. *Id.* art. 3(1).

[FN73]. *Id.* art. 12(1).

[FN74]. *Id.* art. 13(2).

[FN75]. *Id.* art. 10(3).

[FN76]. *Id.* art. 10(2).

[FN77]. Charles Digges, FSB Raids Siberian Eco Group, Confiscating Maps and Computers, *Bellona*, Nov. 25, 2002, at http://www.bellona.no/en/international/russia/envirorights/info_access/27407.html (last visited Jan. 30, 2005).

[FN78]. *Id.* (stating that the items seized also included a list of the names of Baikal Environmental Wave volunteers).

[FN79]. *Id.* (explaining that a deputy head of the FSB, Alexander Nikolyuk, made a televised statement that, despite the charges of disclosing state secrets, no criminal charges would be filed against the Baikal Environmental Wave). Environmentalists claimed the search was a pretext for disrupting any attempt by Baikal Environmental Wave from interfering with a Yukos pipeline project planned to be built through Siberia all the way to China. *Id.*

[FN80]. *Bellona*, Russian State Duma Deputy Initiated Arrest of Environmental Activists, Dec. 16, 2003, at http://www.bellona.no/en/international/russia/envirorights/info_access/31976.html (last visited Jan. 30, 2005).

[FN81]. *Id.*

[FN82]. Jon Gauslaa, European Court of Human Rights: Nikitin Application Admissible, *Bellona*, Nov. 23, 2003, at <http://www.bellona.no/en/international/russia/envirorights/nikitin/31841.html> (last visited Jan. 30, 2005).

[FN83]. Rashid Alimov, Russian Supreme Court: Bellona Suit to Declassify Information on Soviet-Era Nuclear Sub Accidents, *Bellona*, Jan. 7, 2004, at http://www.bellona.no/en/international/russia/envirorights/info_access/32016.html (last visited Oct. 30, 2004) (noting that Russia's Supreme Court held that Bellona's complaint against the Russian Navy's Commander will be heard in the Presnya District Court).

[FN84]. *Id.* The impetus to the suit was a letter sent by Bellona to Russian Defense Minister Sergei Ivanov seeking a public accounting of all accidents aboard Soviet nuclear submarines between 1961 and 1985. *Id.* Claiming to have information pertaining to such accidents from “open sources,” Bellona now seeks to have such information declassified “in strict accordance with Russian legislation.” *Id.*

[FN85]. *Id.*

[FN86]. *Id.* The director of ERC Bellona, Ivan Pavlov, said afterwards, “The court's decision will become a legal preced-

ent for cases concerning the declassification of socially significant information.” Id.

[FN87]. See supra note 66 and accompanying text.

[FN88]. Susannah T. French, [Judicial Review of the Administrative Record in NEPA Litigation](#), 81 Cal. L. Rev. 929, 947-48 (1993).

[FN89]. LPNE, available at GARANT 10008049, at art. 36. For a more in depth discussion of this process, see Deborah K. Espinosa, Comment, Environmental Regulation of Russia's Offshore Oil & Gas Industry and its Implications for the Petroleum Market, 6 Pac. Rim L. & Pol'y 647, 666-72 (1997).

[FN90]. On Ecological Examination, RF Federal Act No. 174-FZ, Nov. 23, 1995, [hereinafter On Ecological Examination], art. 3, available in RusData Dialine - RusLegLine.

[FN91]. Statute of Rules for Performing State Ecological Expert Examination, RF Government Decree No. 698, June 11, 1996, [hereinafter Rules for Performing State EEE], chap. I, art. 5, available in RusData Dialine - RusLegline.

[FN92]. Id. chap. II, art. 15; Espinosa, supra note 89, at 669.

[FN93]. Rules for Performing State EEE, supra note 91, at chap. II, art. 12. Espinosa, supra note 89, at 668.

[FN94]. Rules for Performing State EEE, supra note 91, at chap. II, art. 22. Espinosa, supra note 89, at 668.

[FN95]. On Ecological Examinations, supra note 90, art. 19(1); Espinosa, supra note 89, at 670.

[FN96]. On Ecological Examinations, supra note 90, art. 19(2); Espinosa, supra note 89, at 670.

[FN97]. On Ecological Examinations, supra note 90, art. 22(3); Espinosa, supra note 89, at 670.

[FN98]. On Ecological Examinations, supra note 90, art. 24(1); Espinosa, supra note 89, at 670 (noting that a broad interpretation of what constitutes a “state,” “commercial,” or “other” secret would stifle public participation).

[FN99]. Administrative Procedure Act, 5 U.S.C. §§ 701-706 (2000).

[FN100]. 449 F.2d 1109 (D.C. Cir. 1971). The court held that NEPA created “judicially enforceable duties” to scrutinize agency decision making. Id. at 1115. It required of the Atomic Energy Commission “an exercise of substantive discretion which will protect the environment ‘to the fullest possible extent.’” Id. at 1129 (citation omitted).

[FN101]. For the full range of viewpoints as to what is sufficient to demonstrate standing to sue under the Clean Water Act, for instance, see the majority and dissenting opinions in [Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. \(TOC\), Inc.](#), 528 U.S. 167 (2000).

[FN102]. Jennifer Anne Scott, [Environmental Watchdogs Take a Bite Out of Chilean Foreign Investment: Mandatory Environmental Impact Statements May Affect Foreign Investment in Chile](#), 11 Transnat'l Law. 245 (1998) (discussing the significance of the *Renance v. Conama* decision handed down by the Chilean Supreme Court). In *Renance*, environmental groups and Chilean legislators brought suit against the Chilean government agencies, CONAMA and COREMA, for approving a project that would have allowed the United States Forestry Company to develop Tierra del Fuego. Id. at 258-59. By a 3-2 vote, the Chilean Supreme Court held that approval of the project was “arbitrary and contradicted all the technical recommendations” and ignored the reality of the project's impact on the environment, and that all Chilean

citizens should have standing to appeal. *Id.* at 265-66. See also Armin Rosencranz & Michael Jackson, *The Dehli Pollution Case: The Supreme Court of India and the Limits of Judicial Power*, 28 *Colum. J. Envtl. L.* 223, 236-38 (2003) (detailing the progression of the *M.C. Mehta v. Union of India* case which was decided by the Indian Supreme Court). After a study exposing the staggering fact that approximately 10,000 people die each year in Dehli due to air pollution, an environmental lawyer, M.C. Mehta, filed a public interest litigation suit against the Union of India to force the Indian government to take steps to protect the public by reducing pollutants in the air. *Id.* at 232. The court expressed its frustration with government agencies' failure to hear the voice of India's citizens and children who were adversely affected by the government's refusal to convert buses from diesel power to compressed natural gas. *Id.* For a copy of this opinion, see *M.C. Mehta v. Union of India*, WP13029/1985 (Mar. 26, 2001) (Vehicle Pollution Case: Buses Must Use Natural Gas), available at <http://elaw.org/resources/printable.asp?id=1021> (last visited Jan. 30, 2005).

[FN103]. See Espinosa, *supra* note 89, at 665-66 (summarizing these same statutory and judicial remedies available to Russian citizens for environmental harms).

[FN104]. Konst. RF art. 46, para. 1 (1993), available at <http://www.supcourt.ru/EN/rc.htm> (last visited Jan. 30, 2005).

[FN105]. LPNE, available at GARANT 10008049, at art. 11.

[FN106]. *Id.* art. 56(2).

[FN107]. *Id.* art. 70(2).

[FN108]. The Russian court system in which this litigation takes place is very different from the American system. Russian judicial power is derived from the Russian Constitution and federal law. Konst. RF art. 118, para. 3 (1993), available at <http://www.supcourt.ru/EN/rc.htm> (last visited Dec. 6, 2004). The three high courts of the Russian judiciary are (1) the Constitutional Court of the Russian Federation, which has jurisdiction over, among other things, acts of the Russian President, the State Duma, and the Government of the Russian Federation; (2) the Supreme Court of the Russian Federation, which is the high court for all courts of general jurisdiction, including a three-tiered military court system; and (3) the Supreme Arbitration Court of the Russian Federation, which has jurisdiction over economic disputes. RIN.ru, *State and Power: Judicial Authority*, at http://www.state.rin.ru/cgi-bin/main_e.pl?r=46 (last visited Dec. 6, 2004). Judges of all three high courts are nominated by the President of the Russian Federation and are then appointed by the Federation Council. Konst. RF, art. 128, para. 1(1993), available at <http://www.supcourt.ru/EN/rc.htm> (last visited Dec. 6, 2004).

[FN109]. Greenpeace is a non-profit organization focusing on the "most crucial worldwide threats" to the global environment. Greenpeace, *About Us*, at http://www.greenpeace.org/international_en/aboutus/ (last visited Nov. 6, 2004). Bellona is a non-profit organization that has more recently focused on the problem of nuclear contamination in Russia. Bellona, *A Brief Introduction to the Bellona Foundation*, at http://www.bellona.no/en/about_bellona/18060.html (last visited Dec. 6, 2004).

[FN110]. For examples of involvement by the All-Russian Nature Protection Society and the Ecojuris Institute, see Vera Mischenko & Erika Rosenthal, *Citizen Environmental Enforcement in Russia: The First Successful Nation-Wide Case*, Fifth International Conference on Environmental Compliance and Enforcement 419-421, available at <http://www.inece.org/5thvol1/mischenko.pdf> (last visited Dec. 6, 2004). The All Russian Natural Protection Society is one of Russia's largest national environmental NGOs. *Id.* at 419. The Ecojuris institute was the first Russian NGO to unite public interest environmental lawyers. Ecojuris Institute, *Common Information About Ecojuris Institute*, at <http://webcenter.ru/~ecojuris/einfo.htm> (last visited Dec. 6, 2004).

[FN111]. Mischenko & Rosenthal, *supra* note 110, at 419. This category of forest land consists of “[f]orests with important watershed protection value, riverbanks, greenbelts and endangered species habitat.” *Id.* See also Svitlana Kravchenko, *Citizen Enforcement of Environmental Law in Eastern Europe*, 10 WIDLR 475, 482-83 (2004) (discussing this Ecojuris case against the Russian government).

[FN112]. Mischenko & Rosenthal, *supra* note 110, at 421

[FN113]. *Id.*

[FN114]. See, e.g., *Conner v. Burford*, 605 F. Supp. 107 (D. Mont. 1985) (setting aside the decision by, among others, the Bureau of Land Management and the Forest Service to forego an environmental impact statement (“EIS”) as required by NEPA). These agencies sought to avoid an EIS upon issuing oil and gas leases in national forests. *Id.* at 108. The addition of a “no surface occupancy” (“NSO”) stipulation in the leases would have allowed for piecemeal proposals by lessees that would never have been subjected to review on a cumulative basis. *Id.* at 109. The court held that “[t]o use the NSO stipulation as a mechanism to avoid an EIS when issuing numerous leases on potential wilderness areas circumvents the spirit of NEPA.” *Id.* at 108-09.

[FN115]. Mischenko & Rosenthal, *supra* note 110, at 420.

[FN116]. *Id.* at 419. The Socio-Ecological Union (“SEU”) was initially formed as a coalition of Russian environmental groups operating at regional, city, and district levels. We the Peoples: 50 Communities Awards, Socio-Ecological Union (SEU), Russia, International Institute of Sustainable Development, at <http://www.iisd.org/50comm/commdb/desc/d06.htm> (last visited Dec. 6, 2004). The organization is now international in scope, with over 25,000 members from nineteen countries on three continents. The Home We Built, The Roof We Share, Socio-Ecological Union, at <http://seu.ru/about/eng/> (last visited Dec. 6, 2004).

[FN117]. Mischenko & Rosenthal, *supra* note 110, at 420.

[FN118]. *Id.* Among the state agencies supporting the Ecojuris Institute were the Institute of State and Law, which is the legal arm of the Russian Academy of Sciences, and the State Committee on Environment. *Id.*

[FN119]. *Id.* at 419.

[FN120]. A Presidium is a “a permanent executive committee in socialist countries that has all the powers of some larger legislative body and that acts for it when it is not in session.” Definition of Presidium, available at <http://www.cogsci.princeton.edu/cgi-bin/webwn?stage=1&word=presidium> (last visited Jan. 30, 2005).

[FN121]. *Id.*

[FN122]. *Id.* at 420.

[FN123]. *Id.*

[FN124]. Mischenko & Rosenthal, *supra* note 110, at 420.

[FN125]. *Id.* at 421.

[FN126]. Earthjustice, Russian Environmentalists Sue to Protect Far Eastern Seas, at <http://www.earthjustice.org/news/display.html?ID=136> [hereinafter Earthjustice] (last visited Dec. 7, 2004), noted in Julia

LeMense Huff, [Using the Tools We Have: An Integrated Approach to Protect the Sea of Okhotsk](#), 20 *Pace Envtl. L. Rev.* 693, 713 n.121 (2003).

[FN127]. Earthjustice, *supra* note 126.

[FN128]. *Id.*

[FN129]. *Id.*

[FN130]. *Id.*

[FN131]. *Id.* Prime Minister Stepashin's decree that waived environmental regulations on the project came in his final days in office and after intense lobbying by the oil companies. *Id.* Russian law requires that all draft legislation and decrees that have environmental impacts be submitted for an environmental review. CNN, *Russian First: Groups Sue to Protect Seas*, August 20, 1999, available at <http://www.cnn.com/NATURE/9908/20/env.russia.enn/> (last visited Jan. 31, 2005). The head of the Environmental Expertiza Department at the Russian State Committee on Environment, confirmed that Stepashin's decree did not go through this legally mandated environmental review. *Id.*

[FN132]. Huff, *supra* note 126, at 713 n.121. The plaintiffs in this case felt that the oil projects threatened the gray whale in the Sea of Okhotsk and wanted the court to ban oil and gas activities in what was their primary feeding areas. *Id.* As noted above the court rejected this suit in May of 2002. *Id.* It is of interest to note that the oil and natural gas projects led by Exxon and Royal Dutch Shell have a potential total investment to the Russian economy of \$22 billion. Rebecca Santana, *In Oil We Trust? Russians Have Mixed Feelings*, MSNBC.com, at <http://msnbc.msn.com/id/3158398/> (last visited Jan. 10, 2005). Because of this, the environmental organizations found it difficult to convince governments to enforce its environmental laws when there was so much money at stake. *Id.*

[FN133]. Samantha Brady Carter, [Comment: Defining Nuclear Threats and Vulnerabilities after September 11, 2001: A Legal Planning Analysis to Establish National and International Solutions and Standards](#), 9 *Widener L. Symp. J.* 549, 566 (2003) (noting that in 1996 forty-eight nuclear power plants were operating in Russia in the “five newly independent States of the Soviet Union”).

[FN134]. *Id.* at 590 (reporting that the Russian Ministry of Atomic Energy saw potentially \$20 billion to be made from the processing of imported spent nuclear fuel).

[FN135]. Yevgeny Velikhov & Dmitri Krivolutsky, *Viewpoint: Past, Present, and Future: What Have We Learned of Life in the No-Go Area?*, *Nuclear Eng'g Int'l*, Jul. 31, 2004, at 46. Mr. Velikhov, who is a member of the Russian Academy of Sciences and who worked in the early cleanup of Chernobyl, sees a “bright future” for nuclear energy and cannot imagine a world without it. *Id.* Mr. Krivolutsky, a member of the Russian Academy of Science who studied the biological effects of the Chernobyl accident, states that nuclear waste “is the most harmless type of pollution” and is even less harmful than emissions from burning fossil fuels. *Id.*

[FN136]. See, e.g., Carter, *supra* note 133, at 590 n.239 (citing opinion polls that show widespread distaste among Russian citizens for importing spent nuclear fuel).

[FN137]. See note 134.

[FN138]. Pamela Bickford Sak, *Environmental Law in Ukraine: From the Roots to the Bud*, 11 *U.C.L.A. J. Envtl. L. & Pol'y* 203, 223 (1993). For a more in depth discussion of Russian environmental policy during this period, see Douglas R.

Weiner, *The Historical Origins of Soviet Environmentalism*, 6 *Envtl. Rev.* 42-62 (1982), noted in Sak.

[FN139]. Russian Conservation News, Types and Forms of Russian Protected Areas, at <http://www.russianconservation.org/opttypes.html> (last visited Dec. 2004).

[FN140]. For a further understanding of how much zapovediniki had grown it necessary to comprehend that one hectare refers to a unit of surface area equal to ten-thousand square meters. World Reference.com, Dictionary, available at <http://www.wordreference.com/definition/hectare> (last visited Jan. 22, 2005).

[FN141]. Sak, *supra* note 138, at 223.

[FN142]. *Id.* Stalin's approach had dire consequences for conservationists as he “exterminate[d] an entire generation of ecologists.... set[ting] back scientific evaluation of the environment” until the Khrushchev era. Larry Tye, *The Scars of Pollution: Iron Curtain Rises to Reveal Dirt, Death*, *Boston Globe*, Dec. 17, 1989, at 1 (quoting Nicholas Robinson, an expert on Soviet environmental policies).

[FN143]. Sak, *supra* note 138, at 223.

[FN144]. *Id.*

[FN145]. *Id.* at 224-25.

[FN146]. *Id.* at 225.

[FN147]. *Id.* at 225-27.

[FN148]. Russian Conservation News, *supra* note 139.

[FN149]. David Ostergren, *An Organic Act After a Century of Protection: The Context, Content, and Implications of the 1995 Russian Federation Law on Specially Protected Natural Areas*, 41 *Nat. Resources J.* 125, 135-36 (2001). Recreational activities are allowed in some zapovedniki, though this is controversial and draws the ire of some traditionalists. *Id.* at 136.

[FN150]. Russian Conservation News, *supra* note 139; see also Zaslowsky & Watkins, *supra* note 6, at 41-42 (describing the concern in the 1980s for the impact that tourism and automobiles were having on U.S. national parks). Indeed, the national parks were becoming “as ‘urban’ as... urban parks.” *Id.* at 41.

[FN151]. Russian Conservation News, *supra* note 139. UNESCO (the United Nations Educational, Scientific, and Cultural Organization) designates biosphere reserved that “demonstrate a balance between conservation and development.” Tobermory Chamber of Commerce, *The Niagara Escarpment: A World Biosphere Reserve*, available at <http://www.tobermory.org/unesco.html> (last visited Jan. 25, 2005). In order to qualify as a Reserve, the land must have “one or more protected core areas that conserve significant ecological features.” *Id.*

[FN152]. Ostergren, *supra* note 149, at 134. The Department of Zapovednik Management was created in 1995 and “unifies the preserves in terms of purpose and management direction, providing a single, stronger political voice.” *Id.* at 135. Prior to the formation of this department, zapovedniki could be created by the Ministry of Agriculture, the Ministry of Enlightenment/Education, the National Academy of Sciences, and the Federal Forest Service. *Id.* at 134.

[FN153]. Russian Conservation News, *supra* note 139.

[FN154]. Ostergren, *supra* note 149, at 126.

[FN155]. *Id.* at 127.

[FN156]. *Id.* at 135.

[FN157]. *Id.* at 136.

[FN158]. *Id.*

[FN159]. David Ostergren & Peter Jacques, *A Political Economy of Russian Nature Conservation Policy: Why Scientists Have Taken a Back Seat*, 2 *Global Environmental Politics* 102, 110 (2002), available at <http://jan.ucc.nau.edu/~dmo2/backseat.pdf> (last visited Dec. 7, 2004).

[FN160]. *Id.* at 111; see also note 149.

[FN161]. Ostergen & Jacques, *supra* note 159, at 111 (describing “increased visitation” of zapovedniki as a convergence of Russian zapovednik policy with American wilderness policy).

[FN162]. This is based on the personal observations of the Author.

[FN163]. See notes 90-99 and accompanying text on State Ecological Expert Examinations.

[FN164]. Ostergren, *supra* note 149, at 133 (quoting Article 5 of the Law on Specially Protected Natural Areas).

[FN165]. *Id.*

[FN166]. *Id.* at 147; see also Albina Evgenevna et al., *Aims and Objectives of an Environmental Education and Public Awareness Campaign to Protect the Amur Tiger and its Habitat in Khabarovskii Krai 2003-2005*, 10 (2002), *The Wildlife Foundation*, available at <http://www.wf.ru/prog-eng-tiger.doc> (last visited Dec. 7, 2004) (noting the publicity and financial support generated by various international and Russian NGOs in helping to protect the Amur tiger).

[FN167]. Ostergren, *supra* note 149, at 146.

[FN168]. *Id.*

[FN169]. *Id.* at 146-47.

[FN170]. These thoughts and conclusions are the personal observations of the author while conducting research in Russia.

[FN171]. These thoughts and conclusions are the personal observations of the author while conducting research in Russia.

[FN172]. These thoughts and conclusions are the personal observations of the author while conducting research in Russia.

[FN173]. Robert K. Temple, Note, [Regulation of Nuclear Waste and Reactor Safety Within the Commonwealth of Independent States: Toward a Workable Model](#), 69 *Chi.-Kent L. Rev.* 1071, 1096-97 (1994) (describing the lack of financial resources during the mid-1990s for sophisticated items such as nuclear reactor containment structures that are on a par

with Western standards, and something as routine as spare parts to be used in normal maintenance of power plant operations that are on par with western standards). Not surprisingly, the promise of higher salaries elsewhere has further exacerbated nuclear safety in the former Soviet Union as the accompanying “brain drain” leaves fewer scientists behind to deal with these issues. *Id.* at 1105.

[FN174]. *Id.* at 1071 (describing Kazakhstan's plans to build six nuclear reactors only a few years after the Chernobyl accident).

[FN175]. *Id.* at 1110.

[FN176]. Jason H. Eaton, *Kicking the Habit: Russia's Addiction to Nuclear Waste Dumping at Sea*, 23 *Denv. J. Int'l L. & Pol'y* 287, 292 (1995).

[FN177]. *Id.* This dumping of waste was related to testing performed by Russia on its nuclear-powered submarines and the icebreaker Lenin. *Id.*

[FN178]. *Id.*

[FN179]. *Id.* (indicating that the Murmansk Shipping Company ceased ocean dumping in 1984).

[FN180]. *Id.*

[FN181]. Temple, *supra* note 173, at 1092-93 (noting the radioactive waste dumped in the Siberian steppes and the resulting adverse health effects).

[FN182]. *Id.* at 1093.

[FN183]. *Id.* (explaining that at least 500,000 tons of radioactive solid waste lie underground at a nuclear weapons complex in the Siberian Stirpes).

[FN184]. U.S. Nuclear Regulatory Commission, *Our History*, at <http://www.nrc.gov/who-we-are/history.html> [hereinafter U.S. Nuclear Regulatory Commission] (last visited Dec. 7, 2004) (noting the rapid rise in nuclear power plants in the United States in the 1960s and 1970s).

[FN185]. Jon L. Woodward, Note, *Rivers in Peril: An Examination of International Law and Land-Based Nuclear Pollution in the Former Soviet Union*, 11 *Geo. Int'l Envtl. L. Rev.* 741, 749 (1999); see also *Siberia's Potential* (BBC radio broadcast, Feb. 8, 1985) (suggesting that up to ninety percent of the fossil fuels were located in Russia).

[FN186]. Woodward, *supra* note 185, at 749.

[FN187]. *Id.*

[FN188]. Federation of American Scientists, *Ministry for Atomic Energy (Minatom)*, at <http://www.fas.org/nuke/guide/russia/agency/minatom.htm> (last visited Dec. 7, 2004).

[FN189]. *Id.*

[FN190]. *Id.*

[FN191]. U.S. Nuclear Regulatory Commission, *supra* note 184 (describing the decision in 1974 to separate the AEC into two separate agencies). The Nuclear Regulatory Commission had as its mission the protection of the public safety and health. *Id.* The Energy Research and Development Agency, on the other hand, was charged with “encouraging and conducting research and development in the field of nuclear energy.” Elise Miller, Comment, *The Fox Guarding the Henhouse: Conflicting Duties Under the Marine Mammal Protection Act*, 31 *Santa Clara L. Rev.* 1063, 1074 (1991).

[FN192]. Temple, *supra* note 173, at 1107. In addition to potential conflicts of interest, factors including poor pay and undersized staff contribute to ineffective safety oversight. *Id.*

[FN193]. *Id.*

[FN194]. *Id.* at 1107-08.

[FN195]. See generally BBC News Online, *Russia to Import Nuclear Waste*, June 6, 2001, at <http://news.bbc.co.uk/2/hi/europe/1373005.stm> (last visited Dec. 8, 2004) (quoting opponents who claim that “one hundred million Russian citizens are against” importing nuclear waste). The proposed bill was expected to earn Minatom nearly twenty-billion dollars over ten years. *Id.* The Norwegian environmental group, Bellona, expressed fear at the prospect of nuclear waste being transported along Norway's coast. Rolleiv Solholm, *Fear Transport of Russian Nuclear Waste Along the Coast*, *The Norway Post*, Dec. 23, 2000, available at www.norwaypost.no/content.asp?folder_id=1&cluster_id=14878 (last visited Dec. 8, 2004). Some have suggested a non-economic motive for importing nuclear waste: to provide Russia with materials that can be reprocessed and then used “to develop a new generation of [nuclear] weapons.” Monique Chu, *Russians Ponder Specter of Nuclear Waste Imports*, *Taipei Times*, Feb. 21, 2001, at 3, available at <http://www.taipeitimes.com/News/archives/2001/02/21/0000074556> (last visited Dec. 8, 2004).

[FN196]. Igor Kudrik, Bellona Position Paper, *Import of Spent Nuclear Fuel to Russia*, Dec. 6, 2002, at http://bellona.no/en/international/russia/nuke_industry/waste_imports/22414.html (last visited Jan. 8, 2005). There were three bills passed at the same time that addressed the issue of importing spent nuclear waste: an amendment to the Law on Protection of the Natural Environment, an amendment to the Law on the Use of Atomic Energy, and the Special Environmental Programs for Remediation of the Radioactive Contaminated Areas (“SEPRRCA”). *Id.*

[FN197]. LPNE, available at GARANT 10008049, art. 50.

[FN198]. Kudrik, *supra* note 196.

[FN199]. *Id.* (noting that some Western European countries have considered sending spent nuclear fuel to Russia without the intention to recover the fuel).

[FN200]. ISAR: Resources for Environmental Activists, *Waste Import Threat Rallies Russian Public*, at <http://www.isar.org/isar/archive/GT/GT11nikulina.html> (last visited Jan. 8, 2005). Environmentalists collected 2.5 million signatures in an unsuccessful attempt to require a referendum on the issue. *Id.* When 600,000 signatures were invalidated by the Central Elections Commission, leaving environmentalists 100,000 signatures short of what they needed to impose a referendum, they took to the streets and media outlets in protest. *Id.* The author personally witnessed a colorful but futile protest in Red Square.

[FN201]. See Christina Chuen, Issue Brief, *Russian Spent Nuclear Fuel*, Center for Nonproliferation Studies, Feb. 2003, available at www.nti.org/e_research/e3_25b.html (last visited Dec. 8, 2004); see also Kudrik, *supra* note 196 (claiming that SEPRRCA, the bill that requires funds generated by the importing scheme be spent on the environment, was added

as propaganda to get all three bills passed, and that numerous loopholes exist to prevent these revenues from being used for environmental purposes).

[FN202]. See Russian NPPs, Bellona, at <http://www.bellona.no/en/international/russia/npps/index.html> (last visited Dec. 8, 2004) and The World Factbook 2004, U.S. Central Intelligence Agency [hereinafter Factbook], available at <http://www.odci.gov/cia/publications/factbook/print/rs.html> (last visited Dec. 8, 2004).

[FN203]. Hosting.KM.ru, The Court Has Recognized Legality of Development of Atomic Engineering in Russia, Apr. 4, 2003, available at <http://www.eco-pravda.km.ru/news/bpi3a3.htm> (last visited Dec. 8, 2004) (translation available at <http://www.freetranslation.com/web.asp>).

[FN204]. Id. The target program had received positive reviews by experts. Id.

[FN205]. Bellona, High Capacity 1,500MW Reactor's Design to be Ready in Three Years, Mar. 12, 2004, at <http://www.bellona.no/en/international/russia/npps/leningrad/32813.html> (last visited Dec. 8, 2004).

[FN206]. Id.

[FN207]. Id.

[FN208]. See notes 203-204 and accompanying text.

[FN209]. Vladimir Gubarev, Academician Nikolay Laverov: "It [is] already a science, instead of mysticism", Hosting.KM.ru, available at http://www.eco-pravda.km.ru/int/lg32_3.htm (last visited Dec. 8, 2004) (translation available at <http://www.freetranslation.com/web.asp>).

[FN210]. Id.

[FN211]. Id.

[FN212]. Id.

[FN213]. Chernobyl is located near the Belarus-Ukraine border on the River Pripyat and is the site of the worst nuclear reactor disaster in history. Chernobyl available at <http://www.encyclopedia.com/html/c/chernoby.asp> (last visited Jan. 8, 2005; see also Chernobyl.info available at <http://www.chernobyl.info/> (last visited Jan. 8, 2005). It occurred when during an unauthorized test on one of the plant's reactors, engineers began an uncontrolled chain reaction in the core of the reactor. Id. On April 26, 1986, an explosion ripped off the top of the containment building which released 8 tons of radioactive material into the atmosphere. Id. It has been estimated that as many as 8,000 people died from the accident and during its cleanup.

[FN214]. R.V.Arutyunyan, I.I.Linge, & E.M.Melikhov, Dialogue with the Public About Safety of Atomic Engineering: Lessons of Chernobyl, Hosting.KM.ru, Feb. 2003, available at http://www.eco-pravda.km.ru/science/bma2_03.htm (last visited Jan. 8, 2005) (translation available at <http://www.freetranslation.com/web.asp>).

[FN215]. Id.

[FN216]. Id.

[FN217]. Id.

[FN218]. Id.

[FN219]. Carlotta Gall, Chernobyl's Toxic Cloud Still Darkens the Future, *The Moscow Times*, Apr. 24, 1996.

[FN220]. Id. The “liquidators” include soldiers, firemen, construction workers, and helicopter pilots. Id. “These liquidators have since dispersed across the former Soviet Union and their fate is largely unknown. Ukraine has announced that 6,000 of its liquidators died between 1988 and 1994.” Id.

[FN221]. LPNE, available at GARANT 10008049, art. 42 (describing the LPNE's public participation provision with respect to proposed construction projects); see also Ostergren, *supra* note 149, at 133 (explaining the public participation provisions of LSPNA).

[FN222]. See *supra* notes 110-119 and accompanying text; see also Mikhail M. Brinchuk, Role of the Russian Public in Environmental Enforcement, *Int'l Network for Envtl. Compliance and Enforcement*, at <http://www.inece.org/2ndvol2/BRINCHU2.html> (last visited Dec. 9, 2004).

[FN223]. Mischenko & Rosenthal, *supra* note 109 (listing some of the plaintiff NGOs in the Ecojuris case); see also Ecojuris Institute of Environmental Law, at <http://www.civilsoc.org/nisorgs/russwest/moscow/ecojuris.htm> (last visited Dec. 9, 2004) (providing background information on Ecojuris). For a primer on the Bellona Foundation, see Bellona, A Brief Introduction to the Bellona Foundation, at http://www.bellona.no/en/about_bellona/18060.html (last visited Dec. 9, 2004).

[FN224]. Natalya Davydova, Brain Drain: A Natural Phenomenon?, *Moscow News*, Dec. 3, 1998 (describing how the brain drain not only includes Russian scientists who leave Russia permanently, but the larger group of scientists who work abroad on a temporary basis).

[FN225]. Ethan Burger, *Corruption in the Russian Arbitrazh Courts: Will There Be Significant Progress in the Near Term?*, 38 *Int'l Law.* 15, 15-17, 21-22 (Spring 2004).

[FN226]. Factbook, *supra* note 202 (estimating Russian 2003 per capita income of \$8,900, unemployment at 8.5%, and “considerable underemployment”).

[FN227]. See *supra* notes 46-47 and accompanying text.

[FN228]. See *supra* notes 54-65 and accompanying text.

[FN229]. See, e.g., Robin Munro, Police Cart Away Nuclear Protesters, *The Moscow Times*, Apr. 26, 2002.

[FN230]. Amazonia and Siberia: Legal Aspects of the Preservation of the Environment and Development in the Last Open Spaces 79-82 (Michael Bothe et al. eds., 1993) (discussing the role of Russian scientists in quashing a plan to divert water flow from northern Siberia to the southern regions of the U.S.S.R. in the 1970s and 1980s).

[FN231]. See Kris Wernstedt, Discussion Paper 02-04, Environmental Management in the Russian Federation: A Next Generation Enigma, *Resources for the Future* 23 (Jan. 2002), available at <http://64.233.167.104/search?q=cache:ySfpBWZoNTwJ:www.rff.org/Documents/RFF-DP-02-04.pdf++%22Environmental+Management+in+the+Russian+Federation%22&hl=en> (last visited Nov. 9, 2004) (noting the successes of Russian environmental NGOs “despite continuing harassment with inspections, unfavorable tax treatment, and other hurdles placed by governing authorities”). Some of these NGOs have found success by operating on a small, grassroots

scale, so as to avoid being perceived as “threats to powerful national or regional interests.” *Id.* at 24.

[FN232]. Houck, *supra* note 10, at 173.

[FN233]. *Id.* at 174. For instance, see Press Release, Public Employees for Environmental Responsibility, Wetlands Pollute, Says Study Okayed by EPA - EPA Biologist Resigns in Protest; Study Clears Way for SW Florida Developments, at www.peer.org/press/403.html (last visited Jan. 9, 2005) (discussing the resignation of an EPA employee after the agency stated it would not contest environmental findings of a state, even those findings that were financed by developers); see also Lisa Getter, Federal Worker is Fired in Wildlife Refuge Map Flap, *L.a. Times*, at 30, Mar. 15, 2001 (documenting the firing of a government contract worker who posted a map of caribou calving areas in the Arctic National Wildlife Refuge (“ANWR”) on a government website). President George Bush has pushed for oil and gas drilling in the ANWR. *Id.*

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