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**Russian Forest laws –Scant
Protection During Troubled Times**

by

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*Julia Levin**

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The international community is at the threshold of a new era, freed from the burden of the East-West conflict. Rarely have conditions been so favourable . . . to protect forests . . . and to maintain biodiversity. We therefore urge all countries, developed and developing, to direct their policies and resources towards sustainable development which safeguards the interests of both present and future generations.

—Declaration of the Group of Seven (G-7)
Industrial Nations, Munich, July, 1992.¹

INTRODUCTION

Chekhov once described Siberia as a "sea of forests."² Russia contains one-third of the world's remaining evergreen forests and one-fifth of the world's total forested lands.³ Russian forests mitigate the greenhouse effect,⁴ contain thousands of unique species⁵ and provide the basis for dozens of indigenous cultures.⁶ Although many of Russia's forests are now pristine, the country's economic and political difficulties have caused a full-scale timber rush that threatens vast areas with deforestation. Foreign timber companies have already proposed logging operations within wilderness areas and national park territories.⁷ Government officials, newly privatized and foreign timber consortia, and hundreds of commodities exchanges are eager to trade Russia's forests for hard currency, technology, food, and fuel.

Russia and its regional governments continue to revise the country's forestry and business laws, but the reforms lag considerably behind the deregulation of the economy and the decentralization of power. At the same time, the world is growing increasingly aware of the environmental, public health, and other non-timber values that forests provide.⁸ The

1. *Full Text of the Summit Economic Declaration*, Kyodo News Service, Japan Economic Newswire, July 8, 1992, available in LEXIS, Nexis library, JEN file [hereinafter *Summit Declaration*].

2. ANTON CHEKHOV, *1 Pol'noe Sobranie Sochinenii i Pisem iz Siberii Ostrov Sakhalin 1890-95* [Complete Collection of Writings and Letters from Siberia, Island of Sakhalin 1890-95] 378 (1978).

3. Michael Zimmerman & Peter Riggs, *Bitter Winds Blow Through Siberia*, CHRISTIAN SCI. MONITOR, Jan. 11, 1989, at 18 (explaining that Siberia "contains one-fifth of the world's forest cover"); BRENTON M. BARR & KATHLEEN E. BRADEN, *THE DISAPPEARING RUSSIAN FOREST* 39 (1988) (noting that the "USSR has one-fifth of the world's forested area and over one-quarter of its growing stock"); Armin Rosencranz & Antony Scott, *Siberia's Threatened Forests*, 355 NATURE 293 (1992) (noting that Siberia's forests contain 57% of the world's coniferous forest volume and cover 2.3 million square miles).

4. Rosencranz & Scott, *supra* note 3, at 293.

5. JOHN SPARKS, *REALMS OF THE RUSSIAN BEAR* 198-239 (1992).

6. Divish Petrof, *Juke-box in the Forest: What's the Tune?*, WORLD RAIN FOREST REPORT (Rainforest Information Center, Lismore, Australia), 1992, at 22, 26-28.

7. Rosencranz & Scott, *supra* note 3, at 294.

8. See WORLD RESOURCES INSTITUTE ET AL., *GLOBAL BIODIVERSITY STRATEGY 4* (1992) [hereinafter *GLOBAL BIODIVERSITY STRATEGY*] (describing strategies to preserve biodiversity). This document was prepared jointly by the World Resources Institute, the

next few years present a unique opportunity for Russia and the international community to institute sustainable forestry policies. Such policies would assure the availability of forest resources for long term economic growth, while protecting the forests' biological diversity and indigenous cultures.⁹

This Article presents the changes in Soviet forestry laws during the last few years of Perestroika,¹⁰ examines Russian and regional laws that have been adopted or proposed since the dissolution of the Soviet Union, and concludes by recommending the reform of Russia's forestry laws and the use of international aid to protect its forests.

I

IMPORTANCE AND VULNERABILITY OF RUSSIAN FORESTS

A. *Value of Russian Forests*

According to one Siberian myth, God collected all of the earth's riches and deposited them in Siberia.¹¹ In fact, forest lands cover one billion of the Russian Federation's 1.7 billion hectares of land.¹² The forests of Siberia and the Russian Far East cover 0.6 billion hectares, an area the size of the continental United States.¹³ The forests possess twenty-five percent of the world's timber supply and a wealth of other resources, including most of Russia's reserves of oil and gas, coal, diamonds, and precious metals.¹⁴ In addition, 53,000 rivers traverse Siberia.¹⁵ Over three hundred of those rivers flow into Lake Baikal, located in central Siberia near the Mongolian border.¹⁶ Lake Baikal is the world's oldest and deepest lake and contains one-fifth of the world's fresh water.¹⁷

World Conservation Union, and the United Nations Environment Programme.

9. See generally C.W. Gusewell, *Siberia on the Brink*, AM. FORESTS, May/June 1992, at 17, 20 (describing Siberia as a laboratory in which to experiment with the possibility of developing without destroying land).

10. The Russian word "perestroika" means rebuilding or restructuring.

11. David Lempert, *Where the Moose Have No Blood*, CULTURAL SURVIVAL Q., Winter 1992, at 53, 54.

12. V. Kononenko, *This Year Nearly One-Third of Russian Field Will Be Privatized*, SovData Dialine, BizEkon News, Mar. 5, 1992, available in LEXIS, Nexis library, SBE file. According to a 1983 survey, Soviet forests covered 810.9 million hectares of land (36.4% of the country's territory); the "forest fund," a broader category which included deforested lands and water bodies within forests, comprised 56% of the country's territory. PHILIP R. PRYDE, ENVIRONMENTAL MANAGEMENT IN THE SOVIET UNION 113 (1991). One hectare is equal to 2.47 acres.

13. Rosencranz & Scott, *supra* note 3, at 293. "Siberia" refers to the region of Russia that lies east of the Ural Mountains; Siberians speak of the area bordering the Pacific Ocean as the Far East. Mike Edwards, *Siberia in From the Cold*, NAT'L GEOGRAPHIC, March 1990, at 2, 10, 12.

14. SPARKS, *supra* note 5, at 199-200.

15. Peter Matthiessen, *The Blue Pearl of Siberia*, N.Y. REV. OF BOOKS, Feb. 14, 1991, at 37, 40.

16. *Id.* at 37; Don Belt, *The World's Great Lake*, NAT'L GEOGRAPHIC, June 1992, at 2.

17. Belt, *supra* note 16, at 2.

Russian forests help stem the greenhouse effect¹⁸ and maintain current weather and climate patterns. Siberian forests, which may store as much as forty billion tons of carbon, remove huge quantities of carbon gases from the atmosphere and replace them with oxygen.¹⁹ One hectare of Siberian forest produces seven metric tons of oxygen per year.²⁰ Deforestation is second only to fossil fuel consumption as a cause of increased carbon dioxide in the atmosphere.²¹ Preservation of Siberia's forests is therefore crucial to the maintenance of the world's climatological balance.²²

Russian forests also possess enormous biological riches.²³ Lake Baikal alone contains fifteen hundred plant and animal species found nowhere else in the world.²⁴ The forests provide habitat for leopards, sable, reindeer, brown bears, numerous fish and bird species, and the Siberian tiger, the world's largest tiger species.²⁵ The forests also contain thousands of plant species, including a profusion of nuts, berries, mushrooms, and edible ferns.²⁶ The biological diversity of Russia's forests ensures their productivity and adaptability by purifying waters, increasing soil fertility, and aiding pest management.²⁷ Biodiversity also provides opportunities to adapt to future needs in medicine and biotechnology, and changes in climate and ecology.²⁸ Russians already use 2,500 of

18. The term "greenhouse effect" refers to the atmosphere's absorption and radiation of heat. By the year 2030, the increase in greenhouse gases, primarily CO₂, in the atmosphere is expected to cause global temperatures to rise between 1.5 and 4.5 degrees centigrade. The rise in temperature may severely impair agricultural and forest productivity, reduce the availability of freshwater, and cause sea levels to rise, thereby increasing flooding, erosion, and salification of estuaries and deltas. *The Scientific Consensus, in THE CHALLENGE OF GLOBAL WARMING* 63-65 (Dean E. Abrahamson ed., 1989) (summarizing the report of the International Conference on the Assessment of the Role of Carbon Dioxide and Other Greenhouse Gases in Climate Variations and Associated Impacts, held in Villach, Austria on Oct. 9-15, 1985). Prevention of global warming will probably require not only reductions in CO₂ production, but preservation of forests, which can absorb CO₂ emissions. *See generally* George M. Woodwell & Kilapart Ramakrishna, *Forests, Scapegoats and Global Warming*, N.Y. TIMES, Feb. 11, 1992, at A25.

19. Rosencranz & Scott, *supra* note 3, at 294.

20. Georgi Kuznetsov, VOSTOCHNO-SIBIRSKAIA PRAVDA, May 5, 1991.

21. Woodwell & Ramakrishna, *supra* note 18.

22. Rosencranz & Scott, *supra* note 3, at 294.

23. PRYDE, *supra* note 12, at 119. Forests in the former Soviet Union contained more than 100 mammal species, 300 bird species, and 40,000 insect species. *Id.*

24. Belt, *supra* note 16, at 20.

25. Antony Scott & David Gordon, *The Russian Timber Rush*, AMICUS J., Fall 1992, at 15, 16.

26. *See generally* SPARKS, *supra* note 5, at 198-283 (providing an overview of flora and fauna in Siberia and the Russian Far East).

27. *See* GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 4 (describing the value of biodiversity, causes of losses of biodiversity, and proposed methods of conserving and managing local and international biodiversity).

28. *See id.* at 5.

their native plant species for medicinal purposes.²⁹ Many more could be used for natural pesticides, dyes, perfumes, and other products.³⁰

Russian and Far Eastern forests also provide subsistence for numerous indigenous peoples who hunt, fish, and gather in the forests.³¹ At the beginning of the century, the indigenous people of Siberia and the Far East numbered over a million and were mostly nomadic forest-dwellers and reindeer-herders.³² Centuries of Russian influence had undermined traditional cultures in Siberia even before the Soviet Government began its intentional elimination of ethnic and religious distinctions.³³ Although the Soviet government created autonomous republics for several of the larger ethnic groups, the influx of European Russians made the indigenous peoples minorities even within their own republics.³⁴

Reforms during and subsequent to the Glasnost era have enabled Russia's indigenous peoples to renew many of their traditions and to reclaim the rights to resources necessary for their subsistence.³⁵ Soviet industrial developments and resource management practices seriously damaged or destroyed many traditional hunting and fishing areas,³⁶ which led several of the indigenous peoples to call for their own reservations of land and resources.³⁷ The Autonomous Republic of Buriatia

29. James Brooke, *Global Plan to Rescue Species Set For Release*, N.Y. TIMES, Feb. 11, 1992, at C4; GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 4.

30. GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 5, 92-93.

31. Rosencranz & Scott, *supra* note 3, at 293.

32. James Forsyth, HISTORY OF THE PEOPLES OF SIBERIA 192 (1992).

33. *Id.* at 154-60. The Russians had greatly undermined the subsistence lifestyle of native Siberians by seizing hunting and fishing grounds, making unfair trades, and introducing alcohol into Siberia. *Id.* at 158-60. The Soviets tried to Russify indigenous peoples by persecuting religious leaders (shamans); confiscating property and livestock, which the Soviets often slaughtered; forcing collectivization on traditionally nomadic peoples; teaching only Russian in schools; and constructing industries and railways in traditional hunting areas. *Id.* at 154-58; see also Oleg Bychkov et al., *A People Dwindling Under Centralized Rule*, CULTURAL SURVIVAL Q., Winter 1992, at 57, 60; Belt, *supra* note 16, at 28.

34. Valerii Tishkov, *Ethnicity and Power in the Republics of the USSR*, J. OF SOVIET NATIONALITIES, Fall 1990, at 40; Jens Dahl, *Introduction to INDIGENOUS PEOPLES OF THE SOVIET NORTH* 11, 16 (1990).

35. Postanovlenie Presidiuma Verkhovnogo Soveta Rossiiskoi Federatsii: O proekte Osnov lesnogo zakonodatel'sva Rossiiskoi Federatsii [Decree of the Presidium of the Supreme Soviet of the Russian Federation: On the Draft Law on Forestry of the Russian Federation], Sept. 29, 1992, (Russian Federation) [hereinafter Federation Forest Law Draft]; Ukaz Prezidenta Rossiiskoi Federatsii O Neatlojnikh Mirakh Po zashite Mest Prozhivaniia i khoziaistvenoi Detel'nosti Malochislennykh Narodov Severa [Decree of the President of the Russian Federation on Defense of the Territories of Northern Indigenous Peoples], April 22, 1992, 18 Vedomosti SSSR, item 1009, (1992) (Russian Federation) [hereinafter Decree on Indigenous Peoples]; Belt, *supra* note 16, at 28, 29; Lempert, *supra* note 11, at 55.

36. Bychkov et al., *supra* note 33, at 59. The construction of the Baikal-Amur mainline railroad bisected the migratory path of wild reindeer; large-scale logging and clearcuts reduced wildlife and fish populations; and pollution has rendered many areas uninhabitable. *Id.*

37. Marjorie Mandelstam Balzar, *Nationalism in the Soviet Union: One Anthropological View*, J. OF SOVIET NATIONALITIES, Fall 1990, at 8.

granted such a reservation to the Evenki in late 1991.³⁸ President Yeltsin also issued a decree to guarantee indigenous peoples' rights to the lands which they have traditionally used.³⁹ The decree did not, however, define "traditional lands," and has already become the source of a lawsuit between the Udegei people and the Primorski regional administration.⁴⁰ The dispute is currently in arbitration, but the criteria for determining "traditional lands" are not expected to be finalized until the case reaches the Russian Supreme Court.⁴¹

B. Threats to Russian Forests

Despite the many values of Russian forests, they are disappearing at a rate of two million hectares per year.⁴² Human activities, especially mining and the extraction of oil and gas, require significant forest clearing and greatly increase the number of forest fires.⁴³ Russian foresters estimate that accidental forest fires cause as much deforestation as timber harvesting.⁴⁴ Furthermore, the country lacks the funds and equipment to fight fires effectively.⁴⁵ In addition, air pollution has desiccated hundreds of thousands of hectares of Russian forests and presently jeopardizes the health of a much larger area.⁴⁶ Hydroelectric dams have

38. Zakon Buriatskoi Sovetskoi Sotsialisticheskoi Respubliki: O pravovom statuse evenkiiskikh sel'skikh (poselkovykh) Sovetov narodnykh deputatov na territorii Buriatskoi SSR [Law of the Buriat Soviet Socialist Republic: On the Lawful Status of Evenki Village (Settlement) Soviets of Peoples' Deputies on the Territory of the Buriat SSR], Oct. 24, 1991, (Republic of Buriatia) [hereinafter Status of Evenki]; Interview with Stephan Vladimirevich Kalmikov, Chairman of the Committee on Science, Education, Culture and Sports, Supreme Soviet of Buriatia, in Ulan-Ude, Buriatia (Nov. 21, 1991). See *infra* notes 164-69 and accompanying text.

39. Decree on Indigenous Peoples, *supra* note 35.

40. Postanovlenie O Territorii Traditsionnogo Prirodopol'zovania Malochislennikh Narodov, Prozhivayushchikh V Pozharskom Raione (Decree on the Traditional Territory of Nature Use of the Indigenous Peoples Living in Pozharski territory), June 11, 1992 (Primorski Krai, Russian Federation; Interview with Peter B. Suliandziga, Representative of the Udegei People, in Khabarovsk, Russia (Oct. 29, 1992); Interview with Anatoli V. Lebedef, Deputy to the Primorski Krai Soviet, in Vladivostock, Russia (Nov. 2, 1992). The Primorski Administration has reserved for the Udegei only one-third of the area which the Udegei have traditionally used.

41. Interview with Svetlana Rojkova, Counsel for the Udegei, in Vladivostock, Russia (Nov. 1, 1992).

42. Douglas Stanglin, *Toxic Wasteland*, U.S. NEWS & WORLD REP., April 13, 1992, at 42.

43. Interview with Alexei Grigoriev, Russian Forest Specialist, in Moscow, Russia (Dec. 10, 1991) (Many foresters estimate that human activity causes eighty to ninety percent of all fires).

44. *Id.*

45. Interview with Dr. Valentin V. Furiaev, Fire Specialist, Institute of Forests and Wood, Department of Forest Fire Research, Russian Academy of Sciences, in Krasnoyarsk, Russia (Dec. 5, 1991).

46. Alexei Grigoriev, *Destruction of Forests in the USSR by Industrial Pollution of the Atmosphere*, in ALL OUR LIFE 53-55 (1991). See also G. Galazii, *The Baikal Law*, ENVTL. POL'Y REV., Jan. 1991, at 48, 49.

flooded thousands of hectares of forest lands, destroying millions of cubic meters of wood and an uncalculated amount of wildlife.⁴⁷

The greatest threat to Russian forests is, however, from timber harvesting.⁴⁸ Russian and foreign timber companies currently cut 300 million cubic meters of wood per year.⁴⁹ Ninety percent of the timber is harvested by clearcutting or other concentrated cutting methods.⁵⁰ The fragility of Siberian ecosystems compounds the usual problems of increased erosion and watershed degradation that accompany clearcutting.⁵¹ Most Siberian rivers suffer from serious water pollution, including logs sunk during river transport, sedimentation caused by streamside timber harvesting, industrial discharges, and erosion.⁵² In permafrost regions, timber harvesting transforms fifty percent of the forest lands into swamp lands which cannot be replanted; in drier regions, replanting is only ten to fifteen percent effective.⁵³

Until recently, technical and trade barriers limited the amount of timber harvesting that occurred in Siberia.⁵⁴ But as Russia lifts those barriers and privatization accelerates, Siberia's forests increasingly represent a quick cash crop.⁵⁵ The country's current economic crisis increases the pressure to exploit its forests for short-term profit.⁵⁶

Russia's environmental and business regulations provide little protection against exploitation of the country's forests and the resulting ecological damage. Pricing and taxing mechanisms do not reflect the costs

47. Interview with Andrei Lalyetin, Forestry expert for the Russian Academy of Science, Institute of Forest and Timber, in Krasnoyarsk, Russia (Dec. 4, 1991). See also "Mini" po *Sibirski Rekach*, ROSSIISKAIA GAZETTA, July 9, 1991, at 1-3.

48. PRYDE, *supra* note 12, at 128.

49. Alexei Grigoriev, *Status Report of the Forest Situation in Russia*, TAIGA-NEWS (International Working Group on Boreal Forests, Jokkmokk, Sweden), July 1992, at 2.

50. Rosencranz & Scott, *supra* note 3, at 293; Petrof, *supra* note 6, at 26-27; Scott & Gordon, *supra* note 25, at 17.

51. Scott & Gordon, *supra* note 25, at 17.

52. Matthiessen, *supra* note 15, at 40; MIKHAIL LEMESHEV, BUREAUCRATS IN POWER — ECOLOGICAL COLLAPSE 133-34 (1990).

53. Antony Scott, *Soviet Central Asia's Politics Aren't Simple; Siberian Timber Rush*, N.Y. TIMES, Feb. 27, 1992, at A24. Replanting is ineffective in the non-permafrost regions because of inadequate rainfall and thin, sandy topsoil. *Id.* In permafrost regions, where only a thin layer of topsoil covers frozen ground, timber harvesting damages or removes the topsoil, causing the permafrost to melt. Scott & Gordon, *supra* note 25, at 17. The greenhouse effect may also cause the permafrost to melt and trees to fall in the resulting marshes. *Japan, Russia Conducting Research on Greenhouse Effect Over Siberia*, 15 Int'l Env't Rep. (BNA) 472 (July 15, 1992).

54. See generally Rosencranz & Scott, *supra* note 3, at 293-94 (describing the changes in Siberian timber harvesting that will result from joint ventures currently being negotiated with foreign companies).

55. Reed Glenn, *Environment Falls Prey to Shattered Economy*, CALGARY HERALD, June 7, 1992, at B6. As in many debt-ridden tropical forest countries, short-term economic profits are much more appealing than long-term investments in ecology and public health. *Id.*

56. Rosencranz & Scott, *supra* note 3, at 293; Jane Kay, *Siberian Forests the Next Amazon*, SAN FRANCISCO EXAMINER, Jan. 26, 1992, at A1, A2.

of protecting and replanting forests, the costs of diminishing forest reserves, or the values of tree species diversity and non-timber resources.⁵⁷ Enforcement of forestry regulations occurs rarely, and penalties are too small and too rarely imposed to act as effective deterrents.⁵⁸ Current tax and property laws allow the persistence of old monopolies and the development of new ones.⁵⁹ Private enterprises, such as foreign joint ventures and newly organized commodities exchanges, operate almost without regulation.⁶⁰

Corruption of factory managers and high-ranking bureaucrats has also burgeoned as the government transfers the management and right to profits to the growing private sector.⁶¹ Russian-style insider trading, in which government officials with confidential information execute deals in secrecy and contrary to the public good, has grown quite common.⁶² To compound the problem, foreign timber companies have arrived in Siberia "like scavengers to a road kill,"⁶³ eager to take advantage of the Russians' economic fears.⁶⁴ For instance, the Hyundai Corporation, from South Korea, has convinced the Governor of the Primorski region to allow large-scale timber harvesting despite disapproval by the local council and the Russian Ecology Ministry.⁶⁵ Similarly, the Weyerhaeuser Corporation seeks to harvest timber in the Botcha River Basin, despite the

57. Interview with Alexei Dmitrievich Goloushkin, Minister of Forestry of Buriatia, in Ulan-Ude, Buriatia (Nov. 15, 1991); Interview with Yuri Nikolaevich Udodov, Director of the Ministry of Ecology and Natural Resources for the Irkutsk Oblast, in Irkutsk, Russia (Oct. 23, 1991).

58. Rosencranz & Scott, *supra* note 3, at 293. Until recently, the highest authorized fine was only 100 rubles, *id.*; Petrof, *supra* note 6, at 26, worth about one-tenth of a logger's monthly salary. Recent drafts of forestry and environmental laws do not authorize criminal penalties, injunctive relief, or personal liability for officials' failure to enforce the law. Federation Forest Law Draft, *supra* note 35, pt. VII.

59. See for example the discussion of Zabaikal Les, *infra* notes 173-74, and accompanying text. See generally Dorinda Elliott, *The New Chicago on the Neva*, NEWSWEEK INT'L, Oct. 5, 1992, at 14 (describing mob rule in Russian cities, corruption of police, and the dominance of people with connections); Juliet O'Neill, *Heavy-duty Crime Mars Moscow's Airs*, CALGARY HERALD, Oct. 11, 1992 (estimating that 3000 organized crime groups now operate in Russia).

60. Petrof, *supra* note 6, at 26-27; Rosencranz & Scott, *supra* note 3, at 293.

61. Celestine Bohlen, *Corruption Grows Greedy in Russia*, N.Y. TIMES, Mar. 14, 1992, at A4; Fred Hiatt, *Russians 'Privatize' by Looting State Goods: Property of Old Communist Elite Sold in New Market Economy*, WASH. POST, May 17, 1992, at A1.

62. Bohlen, *supra* note 61, at A4. One commentator refers to this process as "nomenklatura privatization." Hiatt, *supra* note 61, at A1.

63. Gusewell, *supra* note 9, at 19.

64. See Elliot Diring, SAN FRANCISCO CHRON., Sept. 5, 1990, at A6; Rosencranz & Scott, *supra* note 3, at 293. See also Steve Raymer, *Environment Feels Disorder in Russia*, HOUSTON CHRON., May 4, 1992, at 8.

65. Interview with Andrei Lalyetin, Forestry expert for the Russian Academy of Sciences, Institute of Forest and Timber, in Anchorage, Alaska (April 10, 1992); Scott & Gordon, *supra* note 25, at 15; *Tigers in Jeopardy*, 257 SCIENCE 1626 (1992).

Ecology Ministry's objection and the region's interim status as a wilderness area.⁶⁶

Large-scale timber harvesting projects also threaten the subsistence needs of local indigenous groups, who oppose the projects.⁶⁷ Weyerhaeuser's proposed project threatens the livelihood of the Orochi people, who number less than a thousand and who hunt and fish in the Botcha River Basin.⁶⁸ Hyundai's operations threaten the traditional lifestyle of the Udegei people, who hunt and fish in the Bikin River watershed.⁶⁹ Inhabitants of the southwestern region of Chita, who rely on their forests for meat, have blockaded roads and bridges to prevent access by the regional timber company.⁷⁰

Many of Russia's forestry problems result from the country's volatile economic and political situation and its desperate need for hard currency. Yet, many of Russia's current forestry problems can also be traced to Soviet environmental laws and management. The structure of the Soviet Forest Ministry and the general nature of Soviet environmental laws provided a poor framework for the current process of decentralization.

II

THE DEVELOPMENT OF SOVIET FOREST LAWS DURING PERESTROIKA

A. *Exclusive State Ownership — The Forest Ministry Monopoly*

The Soviet Government banned all private ownership of land and natural resources in 1918.⁷¹ Later that year, the Soviet Union's first constitution declared that all natural resources, including forests, animals, and water, were part of the national heritage. Prior to 1988, every version of the Soviet Constitution contained a declaration of exclusive state

66. Scott & Gordon, *supra* note 25, at 16, 17. The Botcha River Basin lies at the intersection of northern boreal and temperate forests and is probably the only place in the world which provides habitat for tigers, reindeer, bears, sable, and salmon in a single ecosystem. *Id.* at 16. The Weyerhaeuser and Hyundai projects could destroy the last pristine habitat of the Siberian tigers, which number less than 300. *Id.*

67. *Id.* at 16.

68. David Gordon, *Joint Logging Ventures in the Russian Far East*, TAIGA-NEWS (International Working Group on Boreal Forests, Jokkmokk, Sweden), July 1992, at 3; *Data on Ethnic Distribution*, J. OF SOVIET NATIONALITIES, Summer 1990, at 159.

69. Scott & Gordon, *supra* note 25, at 16; *Lake Baikal and Siberia: Reconciling Development and the Environment?*, ENV'T WATCH: E. EUR., RUSSIA & EURASIA (Cutter Information Corp., Boston, Mass.), Sept. 1992, at 7 [hereinafter ENVIRONMENT WATCH].

70. Interview with Sergei Ivanovich Novoselov, Reporter for Lesnaia Gazeta, the former official newspaper for the Soviet Forest Ministry, in Ulan-Ude, Buriatia (Nov. 16, 1991).

71. Decree of 19 February 1918, no. 25, art. 346, § 1, SOB. UZAK, RSFSR, 1918; Decree of 20 February 1918, no. 62, art. 674, § 1, SOB. UZAK., RSFSR, 1918, reprinted in JOHN N. HAZARD & MORRIS L. WEISBERG, CASES AND READINGS ON SOVIET LAW 246 (1950).

ownership of these natural resources.⁷² Later versions of the Constitution also provided for exclusive state management.⁷³ These provisions resulted in centralized planning within monolithic agencies and ministries in Moscow.⁷⁴

The Soviet agency responsible for the planning and management of forests was the Forest Ministry, which has been restructured more than twenty-one times since its founding in 1928.⁷⁵ In the mid-1980's, the separate ministries for paper products, furniture, and timber were combined to form the Forest Ministry, which was responsible for both the commercial development and the environmental protection of forest resources.⁷⁶ In an effort to separate its custodial from its commercial functions, the Forest Ministry was divided into two main branches. The branch known as Minleskhov (Ministry of Forest Management) was responsible for forest protection and replanting, while Minlesprom (Ministry of Forest Industry) was responsible for timber harvesting and production.

The Forest Ministry derived its authority from the Soviet Constitution and its specific mandates from the all-Union laws on forestry and natural resource use. The Constitution provided the authority to enact environmental laws and general principles for the use and protection of natural resources in the Soviet Union.⁷⁷ The two legislative bodies, the Congress of People's Deputies and the Supreme Soviet, enacted more specific laws upon agreement of both bodies and the Council of Ministers.⁷⁸ Those all-Union laws authorized the fifteen Republics of the Soviet Union to enact their own environmental laws, theoretically to be

72. See, e.g., KONST. SSSR, art. 11 (1977) (providing that the State is the exclusive owner of the land, its minerals, water, and forests).

73. See, e.g., KONST. SSSR, art. 18 (1988) (setting forth the State's duty to regenerate wealth, improve the human environment, and protect land and resources).

74. Moscow retained all rule-making authority over forest industries and protection, including the establishment of permissible harvest levels, pricing regulations, environmental standards, and budget allocation. Local and regional forest enterprises had far less authority to make decisions than national forest directors in the United States. Interview with Udodov, *supra* note 57.

75. Interview with Valeri Alexeivich Mironev, Forest Minister of the Irkutsk Oblast, in Irkutsk, Russia (Dec. 1, 1991).

76. Interview with Genady Dmitrievich Soroka, Deputy Forest Minister of Irkutsk Oblast, in Irkutsk, Russia (Oct. 18, 1991); Interview with Goloushkin, *supra* note 57.

77. KONST. SSSR (1988). The most recent Soviet Constitution was enacted in 1977. Although there were substantial revisions made in 1988, many of the main principles with respect to natural resources were preserved. Article 18 requires the State to "protect and make scientific, rational use of the land and its mineral and water resources, and the plant and animal kingdoms, to preserve the purity of air and water, to ensure reproduction of natural wealth, and to improve the human environment." Article 42 guarantees the right of each citizen to a healthy human environment. Article 147 requires local agencies to coordinate and control land use and conserve nature.

78. KONST. SSSR, ch. 15, arts. 108-27 (1988).

tailored to the particular environmental circumstances of each republic.⁷⁹ Finally, regional and district level governments could adopt environmental policies, but those policies could not contradict or modify Republic or all-Union laws. Local regulations, therefore, usually concerned little more than administrative procedures and were seldom enforced.⁸⁰

The Russian Forest Law and the Kodeks (code of regulations) contained the principles and standards for the protection and management of Russian forests.⁸¹ The Forest Law divided forests into three categories for purposes of protection and management.⁸² Class I forests were those which were vital for watershed, river, and lake protection; were necessary for erosion or wind control; contained valuable fruit, nuts, or fish-spawning habitat; or grew in subalpine or pre-tundra regions, national parks, or nature reserves.⁸³ Only the Supreme Soviet of the USSR could authorize cutting in Class I forests and only in certain emergency situations.⁸⁴ Class II forests were those near large population centers, and state and local parks.⁸⁵ They were the joint responsibility of the Supreme Soviet and regional forest administrations. All other forests belonged to Class III and could be harvested commercially.⁸⁶ They were the responsibility of the regional administrations.

This method of forest classification created several problems. Both the Ministry and the local administrations tampered with data and surveys to affect the classification of particular forests and thereby acquire management authority.⁸⁷ As a result, timber harvesting was pro-

79. Zakon Soiuza Sovetskikh Sotsialisticheskikh Respublik ob utverzhdenii Osnov lesnogo zakonodatel'stva Soiuza SSR i Soiuznykh respublik, Osnovy lesnogo zakonodatel'stva Soiuza SSR i soiuznykh respublik [Law of the Union of Soviet Socialist Republics on the Ratification of the Fundamentals of Forestry Legislation of the USSR and of the Union Republics], 25 Vedomosti SSSR, item no. 388 (1977) [hereinafter Fundamentals of Forestry].

80. Interview with Ludmilla Vitaleevna Chemezova, Independent Attorney, in Irkutsk, Russia (Nov. 2, 1991). For a general discussion of the application of Soviet environmental laws, see PRYDE, *supra* note 12, at 6-12.

81. Fundamentals of Forestry, *supra* note 79.

82. PRYDE, *supra* note 12, at 116. The Soviet system of forest classification is still in effect in the Russian Federation and newly independent republics such as Buriatia. See *infra* note 146 and accompanying text; Federation Forest Law Draft, *supra* note 35, arts. 14-16.

83. See Fundamentals of Forestry, *supra* note 79, art. 15.

84. Georgi Kuznetsov, VOSTOCHNO-SIBIRSKAIA PRAVDA, June 8, 1991 (discussing Zemel'nyi Kodeks [Land Laws], May 23, 1991, [hereinafter Land Laws]. Emergency situations included international emergencies; opportunities to mine important mineral deposits; proposals to build objects of cultural, historical, medical, or educational importance; or projects designed to meet energy needs. Class I forests comprise 16% of the total national forest area. PRYDE, *supra* note 12, at 116.

85. Land Laws, *supra* note 84. Class II forests comprise only six to seven percent of the national total. PRYDE, *supra* note 12, at 116.

86. PRYDE, *supra* note 12, at 116. Class III is the largest forest category, comprising 77% of the country's forests. *Id.*

87. Interview with Chemezova, *supra* note 80; Interview with Georgi Kuznetsov, in Irkutsk, Russia (Nov. 1, 1991). Not only did the Ministry tamper with the three forest classes, but it often misidentified forest composition so that it could harvest protected tree species, such

hibited in only eight percent of Soviet forests, and was only partially restricted in another twenty-four percent.⁸⁸ In addition, timber harvesting often occurred in Class I forests under the guise of "remedial" or "sanitary" cutting.⁸⁹ Since the Forest Ministry and local administrations received the profits from these harvests, they faced strong incentives to classify forests as diseased or over-mature, which enabled the responsible authority to log the forests.⁹⁰ Minleskhov was also responsible for surveys and inspection of harvesting operations.⁹¹

Nonetheless, the majority of commercial timber harvesting was the domain of Minlesprom, which was theoretically responsible to Minleskhov.⁹² Minlesprom's local organizations (lespromchozi) were responsible for the cutting, distribution, and sale of timber.⁹³ The organizations had to apply to the regional branch of Minleskhov to receive a timber cutting license, which specified the location, amount, and particular conditions for harvesting operations.⁹⁴ Occasionally, licenses required cutting enterprises to replant trees after harvesting, but replanting usually remained the responsibility of Minleskhov.⁹⁵

B. *The Forest Ministry's Failure to Protect Forests*

The mandate and structure of the Soviet Forest Ministry were flawed from the outset. Centralized planning resulted in artificially low timber prices and a much greater emphasis on production quotas than on forest protection.⁹⁶ The Ministry determined the allowable timber harvest level, and then based the regional ministries' budgets upon that level. Local ministries in turn paid cutting organizations for the number of cubic meters cut, whether or not the cutters removed the wood from the forests or delivered it to distribution points. As a result, less than one-

as Siberian larch. Interview with Gregori Galazy, Director of Baikal Ecological Museum, in Irkutsk, Russia (Oct. 15, 1991).

88. Armin Rosencranz, . . . *And Cutting Down Siberia*, WASH. POST, Aug. 18, 1991, at C3.

89. Interview with Kuznetsov, *supra* note 87.

90. See *infra* notes 99-103 and accompanying text.

91. Interview with Vladislav Alekseev, Assistant Director of the Institute of Forest and Timber Research, Russian Academy of Sciences, in Krasnoyarsk, Russia (Dec. 4, 1991).

92. Interview with Vera Lochova, Assistant Director of Ministry of Ecology and Natural Resources of the Irkutsk Oblast, in Irkutsk, Russia (Oct. 21, 1991).

93. *Id.*

94. *Id.*; Interview with Chemezova, *supra* note 80.

95. Interview with Lochova, *supra* note 92; Interview with Chemezova, *supra* note 80. Due to Minleskhov's fiscal and resource constraints, it replanted only 2% of the harvested forest lands. Interview with Alekseev, *supra* note 91.

96. Interview with Udodov, *supra* note 57; see also Armin Rosencranz & Antony Scott, *Siberia, Environmentalism, and Problems of Environmental Protection*, 4 HASTINGS INT'L & COMP. L. REV. 929, 930-31 (1991) [hereinafter *Siberian Environmentalism*]. The Ministry sold Siberian timber for less than a dollar per cubic meter when the timber was worth close to one hundred dollars per cubic meter on the world market. Interview with Udodov, *supra* note 57.

quarter of all timber cut was actually used.⁹⁷ The remainder was lost to inefficient harvest, transportation, and storage methods.⁹⁸ Each layer of the Ministry bureaucracy measured success by the total volume of wood handled, rather than by its profit or efficiency.

The agency charged with overseeing forest protection, Minleskhoz, also depended upon timber proceeds for its budget. Regional administrations of Minleskhoz received the largest share of their budgets from the profits of local cutting operations.⁹⁹ They also received the fines paid by Minlesprom for violations of license terms or environmental regulations.¹⁰⁰ As one observer described the problem, the Forest Ministry paid fines from one pocket into the other.¹⁰¹ Minleskhoz also received the proceeds from sales of timber harvested for sanitary or remedial purposes such as fire protection or prevention of insects and disease.¹⁰² Minleskhoz, therefore, had powerful incentives to encourage timber harvesting, even when it was ecologically or economically unwise. Until the late 1980's, no independent environmental protection agency had the jurisdiction to regulate these activities.¹⁰³

In addition, penalties for environmental violations were too low to act as effective deterrents. The highest authorized fine was only one hundred rubles, less than one-quarter of the average monthly wage.¹⁰⁴ To exacerbate the problem, foreign cutting operations paid their fines with the equivalent amount of timber.¹⁰⁵ In other words, violations by foreign enterprises often resulted in increased timber harvesting.¹⁰⁶

Further, centralized management shielded individuals and committees within the Forest Ministry from responsibility for planning failures.¹⁰⁷ The public had very little access to information and no authority

97. Interview with Marina Nikolaevna Khamarkhanova, Chairperson of the Baikal Fund, Water Pollution Specialist, and Deputy to the Irkutsk Soviet, in Irkutsk, Russia (Oct. 17, 1991); see Petrof, *supra* note 6, at 26 (stating that 50% of timber cut is left on the forest floor, and mills waste another 20%).

98. One Ecology Ministry official estimated that only 11% of timber cut was actually used, 40% was left to rot in the forest, 30% was lost or destroyed during transport, and 20% spoiled in storage. Interview with Lochova, *supra* note 92.

99. Interview with Petr Fedorovich Barsukov, Deputy Chairman of the Russian Forestry Committee, Former Deputy Minister of Forestry, in Moscow, Russia (Dec. 11, 1991). According to Barsukov, Minleskhoz receives one-third of the total profits from timber harvesting. *Id.*

100. Interview with Lochova, *supra* note 92.

101. Interview with Khamarkhanova, *supra* note 97.

102. Interview with Goloushkin, *supra* note 57.

103. In 1988, the Supreme Soviet created an executive agency for the protection of nature, but with limited enforcement ability. See *infra* note 126 and accompanying text.

104. Petrof, *supra* note 6, at 26; Rosencranz & Scott, *supra* note 3, at 293.

105. Rosencranz & Scott, *supra* note 3, at 294.

106. *Id.*

107. Ellen Kirillova, *Environmental Law in the New Soviet Union*, 14 Int'l Envtl. Rep. (BNA) 578 (Oct. 21, 1991).

to challenge the government when violations were apparent.¹⁰⁸ Disputes between agencies were resolved in arbitration, but the decisions were not published and did not apply to subsequent actions, as would agency decisions and rulemaking in the United States.¹⁰⁹ Similarly, Soviet court decisions did not constitute legal precedent, since the Soviet Union was not a common law jurisdiction.¹¹⁰ Therefore, adverse court or arbitration decisions rarely affected the Ministry's actions or policies.

The Forest Ministry was especially ineffective in its oversight of foreign joint venture operations.¹¹¹ The Ministry issued regulations for the establishment and terms of joint ventures, but regional authorities seldom followed them.¹¹² Local representatives of the Ministry usually executed contracts with foreign timber enterprises without notice to the public or the Ministry for Foreign Trade.¹¹³ The Forest Ministry was also loathe to regulate foreign timber operations because of its desire for hard currency and foreign products. The Ministry, therefore, ignored the prison-like labor conditions at a North Korean joint venture in the Khabarovsk region,¹¹⁴ failed to stem large-scale poaching by a venture in the Russian Far East,¹¹⁵ and refused to investigate rumors of toxic effluents from a joint venture in the northern Irkutsk region.¹¹⁶

C. Challenges to the Forest Ministry Monopoly

By the mid-1980's, the shortcomings of centralized planning had become too obvious to ignore. Environmental disasters such as the meltdown at Chernobyl and the draining of the Aral Sea¹¹⁷ fueled a

108. *Id.*; see also Tatiana Zaharchenko, *The Environmental Movement and Ecological Law in the Soviet Union: The Process of Transformation*, 17 *ECOLOGY L.Q.* 455, 474 (1990) (stating that the Soviet legal system has no laws guaranteeing that groups or citizens can obtain environmental information from government officials).

109. Interview with Chemezova, *supra* note 80.

110. JOHN N. HAZARD ET AL., *THE SOVIET LEGAL SYSTEM: THE LAW IN THE 1980's* 31-36 (1984).

111. Rosencranz, *supra* note 88. Several joint ventures exist between Russia and foreign companies or governments for the harvest and exchange of timber and/or profits. Some more recent joint ventures are also based, at least partly, on an exchange for technology or equipment. Interview with Gregori Kuznetsov & Nikolai Volkof, Reporters for VOSTOCHNO-SIBIRSKAIA PRAVDA, in Irkutsk, Russia (Nov. 6, 1991).

112. Interview with Lochova, *supra* note 92; Scott & Gordon, *supra* note 25, at 5. For instance, the Primorski region allowed commencement of the Hyundai joint venture despite Goskompriroda's disapproval. Interview with Lalyetin, *supra* note 47; Scott & Gordon, *supra* note 25, at 15.

113. Interview with Udodov, *supra* note 57.

114. See ENVIRONMENT WATCH, *supra* note 69, at 7; *Die Eroberung hat Begonnen* [The Conquest has Begun], 20 *DER SPIEGEL* 172 (1992).

115. Interview with Lalyetin, *supra* note 47.

116. Interview with Marina Yelizarieva, Reporter for IUNOST', in Irkutsk, Russia (Oct. 14, 1991).

117. PRYDE, *supra* note 12, at 221-26; Vassily Aksyonov, *Another Kind of Pollution: How Ideology Still Threatens Planet Earth*, WASH. POST, June 7, 1992, at C4. Large-scale irrigation projects have diverted the tributaries of the Aral Sea, resulting in a water level reduction of 13

growing environmental movement, which was often linked with demands for greater political independence.¹¹⁸ General Secretary Mikhail Gorbachev responded by introducing numerous decrees and laws to reform the Soviet economy and improve the environment.¹¹⁹ The Supreme Soviet passed legislation legalizing private land ownership and leasing, requiring payment for the use of or damage to natural resources, and allowing the Forest Ministry to impose much stricter penalties for violations of environmental regulations.¹²⁰

The Supreme Soviet enacted several laws in the late 1980's to reform land ownership and use.¹²¹ In 1987, the Supreme Soviet adopted the Law on State Enterprises, which required all enterprises and associations to pay for the use of land and natural resources.¹²² At the time it was adopted, the law seemed to be a rather radical step toward government accountability. Natural resource ministries were to pay for their use of resources and, at least in theory, to manage them more efficiently.¹²³ The Council of Ministers enlarged the payment requirement in early 1988 with a decree: "For the Radical Restructuring of Nature Protection."¹²⁴ The decree provided that payment for natural resources would be based upon the availability, renewability, and economic value of the resources used.¹²⁵

The 1988 Decree also created Goskompriroda, an executive agency responsible for the oversight and coordination of environmental protection by the eight ministries with authority over natural resources.¹²⁶ Goskompriroda was charged with several functions, including managing all activities for environmental protection, preparing environmental as-

eters since 1960. PRYDE, *supra* note 12, at 221. Local temperatures have increased; rainfall patterns have changed; and salinity has tripled. Stanglin, *supra* note 42, at 43. One report estimates that salt and dust released from the lake bed have caused particulate matter in the earth's atmosphere to increase more than five percent. *Id.*

118. Kirillova, *supra* note 107; PRYDE, *supra* note 12, at 2-6.

119. See PRYDE, *supra* note 12, at 3.

120. Zakon Soiuza Sovetskikh Sotsialisticheskikh Respublik o gosudarstvennom predpriiatii (ob"edinenii) [Law of the USSR on State Enterprises (Associations)], 26 Vedomosti SSSR, item 385 (1987); Postanovlenie Tsentral'nogo Komiteta KPSS i Soveta Ministrov SSSR O korennoi perestroike dela okhrany prirody v strane [Decree of the Central Committee of the CPSU and of the Council of Ministers of the USSR on the Radical Restructuring of Environmental Protection in the Country] 6 SP SSSR, item 14 (1988) [hereinafter Nature Protection Decree of 1988]. See also Zaharchenko, *supra* note 108, at 468 (describing the developments of the late 1980's).

121. See *infra* notes 122, 130-33 and accompanying text. The Supreme Soviet is the highest legislative organ of the State and the Council of Ministers is the executive-level cabinet.

122. Law of the USSR on State Enterprises (Associations), *supra* note 120, art. 20.

123. *Id.*

124. Nature Protection Decree of 1988, *supra* note 120.

125. *Id.* § 15. The Forest Ministry calculated economic value on a per-stump basis, without including the value of non-timber resources or the costs of infrastructure development and environmental protection. Interview with Goloushkin, *supra* note 57.

126. Nature Protection Decree of 1988, *supra* note 120, § 6.

assessments of proposed projects, educating the public about the environment, and drafting legislation for environmental protection.¹²⁷

Goskompriroda rarely had the budget or resources to conduct its own studies, and it therefore had to rely on data and surveys presented by the ministries that it was trying to regulate.¹²⁸ The agency's authority to condition or veto the activities of the ministries was unclear, and Goskompriroda rarely prevailed in direct conflicts.¹²⁹

The Supreme Soviet hastened the demise of exclusive state ownership when it enacted laws to legalize private ownership and leasing of land and of natural resources. In 1989, the Supreme Soviet adopted a law which enabled private persons and associations to lease land and natural resources for terms of five years or longer.¹³⁰ The government intended leases to provide the mechanism to transfer management and eventually ownership of land and resources.¹³¹ The Soviet Union's final, and most revolutionary, land law reform was the Property Law of 1990, which legalized some forms of private land ownership.¹³² The law declared that land and natural resources were "the inalienable common wealth of the peoples living in the territory in question."¹³³ The law was very general in its terms and failed to indicate whether or not the Soviet Government intended to retain exclusive authority over certain areas, such as the national parks and nature reserves.¹³⁴ Instead of creating specific guidelines for the transfer of state-owned property, the law removed any recognizable authority or control over land and resources.¹³⁵

III

APPROPRIATION OF AUTHORITY BY REGIONAL GOVERNMENTS

By the beginning of 1991, the process of gradual reform had become one of rapid dismantling. Regional governments and autonomous republics¹³⁶ in Russia began to adopt laws and decisions declaring themselves

127. *Id.* § 7.

128. Interview with Lochova, *supra* note 92.

129. *Siberian Environmentalism*, *supra* note 96, at 931-32.

130. Fundamentals of Forestry, *supra* note 79, item 481.

131. Interview with Victor Vasilivich Ignatenko, Chairman of the Irkutsk Oblast Soviet, in Irkutsk, Russia (Dec. 3, 1991).

132. *Osnovy zakonodatel'stva Soiuza SSR: soiuznykh respublik o zemle* [Fundamentals of Legislation of the USSR and of the Union Republics on Land], 10 *Vedomosti*, item 129, art. 20 (1990) [hereinafter *Fundamentals of Land*].

133. *Id.* § 1; *Zakon SSSR o sobstvennosti v SSSR* [Law of the USSR on Ownership in the USSR], March 14, 1990, 11 *Vedomosti SSSR*, item 164, art. 20, § 1 (1990).

134. Interview with Zoia Simkina, Assistant to the Director of Prebaikalski National Park, in Irkutsk, Russia (Nov. 30, 1991).

135. *Id.*

136. Russia was one of 15 all-Union republics within the Soviet Union. Russia was further divided into autonomous republics, oblasts, and regions (districts or counties). The autonomous republics now have the status of commonwealths within the Russian Federation; the

sole owners and managers of land and resources within their territories.¹³⁷ By the end of the year, power struggles had moved from the national level to the regional and local levels, with each level declaring itself the rightful owner and manager of the natural resources within its territory. Adding to the confusion, the Supreme Soviet of the Russian Federation had failed to define the respective authority of the different types of regional governments and the balance of power between Moscow and the republics, oblasts, and regions.¹³⁸ The distribution of authority over natural resources and the environment was equally ambiguous.¹³⁹

Confusion over the respective governments' responsibility for natural resources is causing an ever-widening gap in authority over those resources, and, thus, areas of near lawlessness. The resolution of ownership and management of natural resources is particularly important in Siberia because the region depends upon the export of raw materials and natural resources for its economic survival.¹⁴⁰ In the following subsections, this Article examines the forest law reforms adopted by several regions within Russia as they have begun to assert their autonomy.

A. *The Forest Law of Buriatia*

The Autonomous Republic of Buriatia, north of Mongolia, was the first region to declare that its forests belong to the people of the region, under the sole authority of the Buriat Supreme Soviet.¹⁴¹ Buriatia has since declared independence from the Russian Republic, although it remains a member of the Russian Federation.¹⁴² Although Buriatia is not

oblasts approximate states; and the regions ("rayon" and "krai") approximate territories or districts, such as the District of Columbia in the United States. *Zakon Rossiskoi Federatsii O Kraevom, Oblastnom Soviete Narodnikh Deputatov: Kraevoi, Oblastnoi Administratsii* [Law of the Russian Federation on the Soviets and Administrations of Krai and Oblasts], March 5, 1992, 13 *Vedomosti*, item 663 (1992).

137. *Zakon Buriatskoi Sovetskoi Sotsialisticheskoi Respubliki: O lese* [Law of the Buriat Soviet Socialist Republic: On Forests], April 26, 1991 (Buriat Soviet Socialist Republic) [hereinafter *Buriat Forest Law*]; *Reshenie: O ratsional'nom ispol'zovanii lesnykh resursov oblasti* [Decision: On the Rational Use of Oblast Forest Resources], Decision No. 6/29, Oct. 18, 1991, para. 2 (Irkutsk Oblast) [hereinafter *Irkutsk Forest Decision*].

138. Interview with Ignatenko, *supra* note 131.

139. *Approval of Russian Free Trade Zones will Boost Investment, Experts Predict*, 9 *Int'l Trade Rep.* (BNA) 1107 (June 24, 1992) [hereinafter *Russian Free Trade Zones*].

140. See generally *Siberian Environmentalism*, *supra* note 96, at 929-30 (noting that Siberian forest and water resources are exported for timber, hydroelectric projects, and pulp operations and that the region's fossil fuel and mineral deposits generated half of the Soviet Union's hard currency earnings).

141. *Buriat Forest Law*, *supra* note 137.

142. *Buriatia is Not Acceding to Mongolia Yet*, *SovData Dialine, BizEkon News*, May 25, 1992, available in LEXIS, Nexis library, Omni file. Buriatia, which has been part of the Russian state for almost four centuries, has strong political and economic ties to Russia. *Id.* Although Buriatia is unlikely to rejoin the Russian Republic, it will probably remain a member of the Federation.

one of Russia's largest forest regions,¹⁴³ its forest law is significant for several reasons. The Law has become a model or starting point for other republics, oblasts, and even the new Russian Federation Forest Service.¹⁴⁴ Many of the Law's provisions, such as those restricting the Buriat Forest Ministry's role, have already been duplicated in other laws.¹⁴⁵

Several parts of the Buriat Law are patterned after the Russian Forest Law. The classification of forests and the level of protection for each class are the same as under Russian law.¹⁴⁶ General provisions regarding the rights and duties of forest users, such as the obligations to use ecologically sound methods and to replant forests, are also modeled after the Russian Forest Law.¹⁴⁷ Nonetheless, certain provisions in the Buriat Law are quite innovative and, if implemented, would vastly improve forest protection in the region. The two most significant changes in the Buriat Law concern the functions of the forest ministry in Buriatia and the expanded range of sanctions available.

The Buriat Law clearly defines and limits the role of the Forest Ministry in Buriatia.¹⁴⁸ The Forest Ministry is responsible for determining the allowable harvest level, the proper forest users, and the appropriate costs of different forest uses.¹⁴⁹ Prices for forest uses must include the costs of protection, replanting, and infrastructure investments, and are subject to the approval of Buriatia's legislature.¹⁵⁰ The Ministry may not cut or sell timber under any circumstances, not even for sanitary or remedial purposes.¹⁵¹ If such cutting is necessary, the Ministry must authorize a commercial enterprise to harvest the wood, and charge the enterprise a "stump fee" based upon the forest's reduced value.¹⁵²

143. Interview with Dr. Arnold Tulokhonov, Director of Geomorphology and Nature Management, Siberian Division of the Russian Academy of Sciences, in Ulan-Ude, Buriatia (Nov. 12, 1991); Interview with Soroka, *supra* note 76; Interview with Valeri Vasilovich Belkov, Deputy Director of the Krasnoyarsk Forest Ministry, in Krasnoyarsk, Russia (Dec. 6, 1991). Buriatia's timber stock is estimated at 13.7 billion cubic meters, of which it cuts approximately five million cubic meters per year. In comparison, Irkutsk and Krasnoyarsk cut 39 million and 25 million cubic meters per year respectively.

144. Interview with Goloushkin, *supra* note 57.

145. *Id.* See, for example, the discussion of Decrees 1147 and 1148, which limit the new Forest Service's role to protection and management of forests, *infra* notes 223-26.

146. Buriat Forest Law, *supra* note 137, pt. III, art. 18; see discussion accompanying *supra* notes 83-86.

147. Buriat Forest Law, *supra* note 137, pt. II, arts. 15-17; Fundamentals of Forestry, *supra* note 79.

148. Buriat Forest Law, *supra* note 137, art. 11.

149. *Id.* pt. I, art. 11.

150. *Id.* pt. V, art. 40.

151. Interview with Goloushkin, *supra* note 57.

152. *Id.*

The Ministry is supposed to be financed entirely by the state budget and any fines collected for violations of the Forest Law.¹⁵³ The Ministry no longer receives a percentage of timber or other forest resource profits directly from forest users. This should remove much of the incentive to increase forest exploitation.¹⁵⁴ Forest users must pay their fees directly to the state, which determines the Ministry's budget without consideration of the profits received from forest users.¹⁵⁵ The Buriat Law also establishes a Forest Committee, under the jurisdiction of the legislature, to help draft regulations for the management and protection of forests.¹⁵⁶

The Ministry now keeps half of any fines collected, and rangers who find violations are entitled to two percent of the total fine.¹⁵⁷ Local administrative offices of the ministry may cancel a license if the forest user continues to violate its terms or conditions, and the office can refuse to issue licenses to past violators.¹⁵⁸ When a forest user violates the terms of its license, the Ministry is also authorized to increase the stump fee to ten times its original amount.¹⁵⁹ For very severe violations, such as intentional cutting in prohibited areas or cutting without a license, the Forest Law authorizes criminal penalties.¹⁶⁰ Two timber cutters have already been sentenced to prison terms for intentionally starting forest fires.¹⁶¹

One of the most significant additions to the Buriat Law is a provision that holds government officials personally liable if they fail to fulfill their duties to protect and manage the Republic's forests.¹⁶² The Law authorizes both the legislature and the state prosecutor to enforce this provision against particular officials, but it does not authorize private citizen suits for enforcement.¹⁶³

Another important aspect of the Buriat Law is a provision that recognizes the rights of indigenous groups to maintain their traditional cultures without interference by the Forestry Ministry.¹⁶⁴ In addition to exempting indigenous peoples from license requirements for forest uses, the Law grants indigenous groups the right to prohibit commercial timber harvesting on their lands, whether or not harvesting would actually

153. *Id.*

154. *Id.*

155. *Id.*

156. Buriat Forest Law, *supra* note 137, pt. I, art. 11.

157. Interview with Goloushkin, *supra* note 57.

158. *Id.*; Buriat Forest Law, *supra* note 137, art. 6.

159. Interview with Goloushkin, *supra* note 57.

160. Buriat Forest Law, *supra* note 137, pt. VII, arts. 45, 46.

161. Interview with Goloushkin, *supra* note 57. Many forest fires are set intentionally so that enterprises or local residents can harvest wood at low or no cost or in areas that would otherwise be protected from timber harvesting. *Id.*; Interview with Grigoriev, *supra* note 43.

162. Buriat Forest Law, *supra* note 137, pt. I, art. 8.

163. *Id.* pts. I, VII arts. 8, 45-46.

164. *Id.* pt. IV, art. 36.

impair their subsistence lifestyle.¹⁶⁵ In October 1991, Buriatia adopted a second new law specifically for the protection and assistance of indigenous populations.¹⁶⁶ After the law was enacted, members of Buriatia's executive branch met with Evenki leaders to determine how best to effectuate the law's guarantees.¹⁶⁷ They decided to give the Evenki jurisdiction over the Mumski district of northwestern Buriatia, which has valuable reserves of sable, gold, and timber.¹⁶⁸ The leaders did not indicate whether the Evenki would be exempt from the Buriat Law if they engaged in commercial timber harvesting for sale outside the Mumski territory.¹⁶⁹

Although the Buriat Law dismantles much of the former Forest Ministry monopoly, it also contains several flaws. Above all, it fails to provide specific precepts to guide the Ministry in setting prices for, and taxes on, forest use. At present, neither Russia nor Buriatia have tax codes appropriate to a market economy and private ownership.¹⁷⁰ The Law also fails to establish specific environmental standards — it merely states that forest users must employ ecologically sound methods and follow the very general forestry regulations provided in the Russian Forest Codeks.¹⁷¹ Nor does the Law provide guidelines for the establishment and taxation of foreign joint ventures. Foreign companies are, therefore, not required to invest in Buriatia's infrastructure, provide new technology, or develop value-added industries.¹⁷²

Finally, while the Ministry no longer has a monopoly on timber cutting, the enterprise which took over most Ministry cutting operations, Zabaikal Les, still constitutes a monopoly.¹⁷³ Zabaikal Les is responsible for forty percent of the republic's timber harvesting and most of the republic's wood processing and finishing facilities.¹⁷⁴ Smaller enterprises will find it very difficult to compete with Zabaikal Les as prices are liberalized. This lack of competition is likely to prevent the diversification of forest-based industries and to impair the development of more efficient environmental technologies.

165. *Id.*; Interview with Kalmikov, *supra* note 38.

166. Status of Evenki, *supra* note 38.

167. Interview with Kalmikov, *supra* note 38.

168. *Id.*

169. *Id.*

170. Interview with Alexander S. Sheingauz, Vice Director General of the Economic Research Institute, Russian Academy of Sciences, in Khabarovsk, Russia (Oct. 30, 1992).

171. Buriat Forest Law, *supra* note 137, pt. I, arts. 8-10.

172. *See id.* The development of value-added industries, such as wood processing or manufacturing facilities, would increase the number of jobs and the region's profit from the extraction of its raw materials. *See generally* GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 38.

173. Interview with Tulokhonov, *supra* note 143.

174. Interview with Marina Tsirinbazara, Counsel for Zabaikal Les, in Ulan-Ude, Buriatia (Nov. 15, 1991).

Buriatia is not, unfortunately, the only republic to face such problems. The Sakha Republic (formerly, Yakutia), in northeastern Siberia, has had to restrict visitors because of the chaotic looting of its resources.¹⁷⁵ Sakha, which declared independence from Russia in December 1991, appears less certain than Buriatia to remain a member of the Russian Federation.¹⁷⁶ The Sakha Republic, which is the size of France, contains vast reserves of diamonds, oil, gas, and timber.¹⁷⁷ Sakha, along with two other newly independent republics, has protested new Federation restrictions on the right of republics to determine their own budgets and share in the Federation budget.¹⁷⁸ Sakha has declared that it will conduct relations with the Russian Republic on the basis of international law and that it has sovereignty over its natural resources, including land and forests.¹⁷⁹ One Sakha joint stock company, established to support entrepreneurial activity and small businesses, has already promised Japanese businesses access to Sakha's timber and other resources.¹⁸⁰

Buriatia and Sakha have achieved much greater independence from Moscow than the oblasts and regions are likely to attain, but the two republics nonetheless represent the trend toward greater freedom from Moscow.

B. *The Oblasts and Regions Assert Their Authority*

In October 1991, the Irkutsk Oblast, to the west of Buriatia, issued a Decision to take control of the management of its forests (the Forest Decision).¹⁸¹ Irkutsk could not legally declare itself to be the owner of the oblast's forests,¹⁸² but the Forest Decision nonetheless sent a power-

175. *Russian Diamond-Producing Region Restricts Visits*, REUTER MONEY REPORT, August 30, 1992, available in LEXIS, Nexis Library, MONRPT file.

176. Olga Glezer, *You May Bargain Here*, MOSCOW NEWS, Mar. 11, 1992, available in LEXIS, Nexis library, MOSNWS file; *Commonwealth: A Shaky Alliance*, OTTAWA CITIZEN, Feb. 13, 1992, at A6, available in LEXIS, Nexis library, Ottawa file.

177. Lempert, *supra* note 11, at 53-56.

178. Radik Batyrshin Nega, *Kazan, Ufa, and Yakutsk Have United Against Russia's Parliament*, SOVIET PRESS DIGEST, Aug. 15, 1992, available in LEXIS, Nexis library, SPD file; *Tatarstan, Bashkortostan and Yakut-Sakha Statement on Strengthening Sovereignty* (BBC radio broadcast, Aug. 15, 1992), available in LEXIS, Nexis library, BBCSWB file.

179. Glezer, *supra* note 176.

180. *International Relations; Japan Company Seeks Partners for Yakut Timber and Minerals* (BBC radio broadcast, Mar. 6, 1992), available in LEXIS, Nexis library, BBCSWB file.

181. Irkutsk Forest Decision, *supra* note 137.

182. Interview with Barsukov, *supra* note 99. Forest lands within Russia continue to belong to the Federation government. See O Razgranichenii Gosudarstvenoi Sobstvenosti V Rossiskoi Federatsii Na Federal'nyu Sobstvenost Respublic V Sostave Rossiskoi Federatsii, Kraev, Oblastei, Avtonomnoi Oblasti, Avtonomnikh Okrugov, Gorodov Moskvi i Sankt-Peterburga i Municipal'nyu Sobstvenost [On the Delineation of State Property in the Russian Federation Into Federal Property, State Property of Republics Within the Russian Federation, Krays, Oblasts, the Autonomous Oblast, Autonomous Okrugs, the cities of Moscow and St. Petersburg, and Municipal Property], Jan. 9, 1992, 3 Vedomosti, item 89 (1992) (Russian Fed-

ful message to Moscow. Because Irkutsk is the largest and most important forest region in Russia¹⁸³ and possesses significant oil and mineral reserves, Moscow views the oblast's signs of independence with trepidation.¹⁸⁴ In fact, a few weeks after Irkutsk adopted the Decision, Gorbachev visited the region to gauge whether it was a portent of Irkutsk's future actions.¹⁸⁵

Irkutsk's Decision resembles the Buriat Forest Law, but does not contain Buriatia's most important reforms. Like the Buriat Forest Law, Irkutsk's Decision declares that the Oblast's forests belong to the people of the Oblast and vests the authority for forest management and protection in the administration and legislature.¹⁸⁶ The legislature has also created a fifteen-person Forestry Committee to advise the legislature on forestry decisions and legislation.¹⁸⁷ The Forest Decision also declares that all forest users must lease forest lands, and that leases must include the value of the wood as well as the costs of forest protection.¹⁸⁸ Unlike Buriatia's Forest Law, however, the Irkutsk Forest Decision does not prevent the Forest Ministry from harvesting and selling timber. The Decision does, however, require forest users, including the Ministry, to pay for their uses.¹⁸⁹

On the other hand, the Irkutsk Decision corrects some of the deficiencies in Buriatia's Forest Law. The Decision requires foreign joint ventures to import new technology, equipment, and necessary goods in exchange for forest products.¹⁹⁰ In addition, all timber cutting enterprises must replant the areas they cut in order to qualify for new leases.¹⁹¹ Irkutsk's Decision also provides specific guidelines for timber pricing. The legislature decided that export prices would match world market prices for timber, but that prices of exports to former Soviet re-

eration) [hereinafter Property Law].

183. Irkutsk is larger than the state of Texas and 75-80% of its territory is covered by forests. The oblast contains more than seven hundred square kilometers (51.8 million hectares) of forest lands, with a timber supply of eight to nine billion cubic meters. Approximately forty million cubic meters of timber are cut in the oblast annually. Interview with Mironev, *supra* note 75.

184. Interview with Ignatenko, *supra* note 131.

185. Interview with Vladimir Sbitnef, Reporter for IZVESTIS, in Irkutsk, Russia (Nov. 30, 1991).

186. Irkutsk Forest Decision, *supra* note 137, pt. I.5.

187. Session of the Irkutsk Oblast Soviet, Oct. 17, 1992 (author's personal observation).

188. Irkutsk Forest Decision, *supra* note 137, pt. I.2

189. *Id.*

190. Necessary goods include medical supplies, fuel, and materials meeting other social needs. *Id.*

191. *Id.* pt. I.4. Irkutsk enforced this provision immediately against three Uzbek enterprises which it prohibited from further harvesting because they refused to replant the areas they have cut. Kuznetsov, *supra* note 20.

publics would have to be set somewhat lower because of Irkutsk's dependence on supplies from those regions.¹⁹²

Less than a week after Irkutsk passed its Decision, the Krasnoyarsk region followed suit.¹⁹³ Since Krasnoyarsk is classified as a territory (rayon) rather than as an oblast, it had even less authority to take control of its lands and resources than did Irkutsk.¹⁹⁴ Yet Krasnoyarsk's legislators expected President Yeltsin to increase the authority of regional and oblast governments, and they adopted their Decision in anticipation of the region's new status.¹⁹⁵ The Krasnoyarsk Decision is much less specific than either the Buriat Forest Law or the Irkutsk Decision, and typifies decisions adopted by other regions in Siberia.¹⁹⁶ It does not provide adequate regulations for the execution of leases or foreign joint venture agreements, nor does it contain provisions for establishing prices and taxes.¹⁹⁷ It also fails to establish a maximum allowable timber harvest level for the region.

At present, none of the regional governments in Siberia have created sufficient legal mechanisms to take over authority of their forests. As soon as Moscow relinquished some of its authority, the power struggle simply moved to the oblast, regional, and district levels. For instance, several sub-oblasts in northern Irkutsk began to assert local control over their forests because the more powerful southern districts had already been cut.¹⁹⁸ The dispute was temporarily resolved when the southern districts threatened to stop supplying oil and chemical products.

Power struggles between the different levels of government have left a gap in authority which prevents effective forest regulation and management by any potentially responsible level of government. Both the national and the regional governments recognize the importance of resolving their conflicting claims of authority over forests and other natural resources. In fact, Irkutsk and Krasnoyarsk only adopted their Decisions after long and heated debates in their legislatures about the relative advantages of national and regional control over forests.¹⁹⁹

192. Irkutsk Forest Decision, *supra* note 137.

193. Reshenie o sovershenstvovanii upravleniia i pol'zovaniia lesami na territorii kraia [Decision of the Krasnoyarsk Krai Soviet of People's Deputies on the Administration and Use of Forests in its Territory], Oct. 24, 1991 (Krasnoyarsk Krai) [hereinafter Krasnoyarsk Forest Decision].

194. Interview with Belkov, *supra* note 143.

195. *Id.*

196. Krasnoyarsk Forest Decision, *supra* note 193; Interview with Lalyetin, *supra* note 47.

197. *Id.*

198. Interview with Ignatenko, *supra* note 131.

199. The entire Irkutsk Oblast Soviet debated the issue for four days, from October 15 to 18, 1992. Unlike Buriatia, however, Irkutsk and Krasnoyarsk seemed concerned only with economic, rather than political, independence from Moscow. Interview with Ignatenko, *supra* note 131; see *supra* notes 136-37, 141-42 and accompanying text.

C. *Advantages and Disadvantages of Regional Control*

There are several advantages to regional control of forest resources. Most importantly, regional officials are more likely to be familiar with, and may feel a proprietary interest in, their local resources.²⁰⁰ For example, both Irkutsk and Buriatia have begun to conduct their own forest surveys because the surveys relied on by the Soviet government had been prepared by Byelorussian foresters who had misidentified many Siberian tree species.²⁰¹ Local authorities are also less likely to allow large-scale development projects that threaten serious environmental degradation and primarily benefit other regions.²⁰² Finally, individuals and grass-roots organizations are much more likely to successfully influence local authorities than bureaucrats in Moscow.²⁰³

On the other hand, local authorities may be more likely to think about short-term economic needs, rather than environmental and public health concerns.²⁰⁴ Panic about the future of the Russian economy and shortages of many goods will only exacerbate that tendency. Regional officials who have long been denied the benefits of the forests' wealth may be strongly tempted by promises of hard currency and foreign goods.²⁰⁵

The most serious danger of regional control is to the national parks and nature reserves.²⁰⁶ In 1991, Irkutsk formally declared that it had authority over Prebaikalski National Park and the Baikalo-Lenski Nature Reserve, and other regions have followed suit.²⁰⁷ While regulation of national parks under the Soviet Forest Ministry was less than exemplary, a legal framework at least existed.²⁰⁸ Under regional control, national parks receive little more protection than do other forest lands.²⁰⁹

200. Interview with Khamarkhanova, *supra* note 97.

201. Interview with Alexei Grigoriev, Russian Forest Specialist, in Moscow, Russia (Oct. 3, 1991); Interview with Tulokhonov, *supra* note 143.

202. Interview with Khamarkhanova, *supra* note 97.

203. *Id.*

204. *Siberian Environmentalism*, *supra* note 96, at 945.

205. Rosencranz & Scott, *supra* note 3, at 294.

206. The system of nature reserves ("zapovedniki") has existed since the 1920's, primarily for scientific research and the preservation of representative or unique ecosystems, flora, or fauna. PRYDE, *supra* note 12, at 136-38. Restricted access to the reserves, however, precludes their use for sustainable forest industries, such as ecotourism, and has caused resentment among nearby residents. Alexander A. Nikol'skii et al., *Regional Review: North Eurasia*, in *Regional Reviews* 6.1, 6.4 (International Union for Conservation of Nature ed., 1992).

National parks, on the other hand, have only existed since the 1970's. *Id.* at 6.5. Since national parks were created by legislation in the Union republics where the parks were located, no uniform law or code of regulations existed for the management and regulation of the parks. PRYDE, *supra* note 12, at 160-62. National parks also suffer from the lack of a single, uniform national park service. Instead, they are governed by the members of the Forest Committee of the Ecology Ministry. *Id.*

207. Interview with Simkina, *supra* note 134; Interview with Gary Cook, Director of Baikal Watch, Earth Island Institute, in Berkeley, California (Sept. 3, 1992).

208. Interview with Simkina, *supra* note 134.

209. *Id.*

National park administrators are now fighting plans by local authorities to develop park lands and resources.²¹⁰ For instance, new settlements and housing developments have appeared in the Prebaikalski National Park and the Borodino Field Sanctuary, despite opposition from the Parks' administrators.²¹¹ In addition, a pipeline has replaced 35,000 trees in Russia's oldest national park, the Losina Ostrov.²¹²

Despite the many disadvantages of regional control, the regional governments are unlikely to delegate any authority back to Moscow, and the Russian Government is currently unable to reclaim that authority. Yet, the regional governments also have little actual control over the timber enterprises within their regions.²¹³ Regional enterprises seem to operate almost without regulation, and foreign enterprises seek permission to operate from whichever level of government is most likely to grant it to them.²¹⁴ To avoid this problem, Russia is likely to move toward a federal system of forest management, in which the national and the regional governments share responsibility for their forests.

IV

MOSCOW'S RESPONSE TO REGIONAL FOREST LAWS — THE PROCESS TOWARD FEDERALISM

A. Development of the Russian Forest Service

In an attempt to reduce bureaucracy and regain national control over natural resources, President Boris Yeltsin combined five natural resource ministries and Goskompriroda into a new Ministry for Ecology and Natural Resources (the Ecology Ministry).²¹⁵ The Ecology Ministry was comprised of the former Ministries of Forestry, Geology and Hydrology, Meteorology, Hunting, and Fishing, each of which became a "Committee" within the Ecology Ministry.²¹⁶ The Minister of this monolithic agency is Victor Ivanovich Danilof-Danilian, a former mathematician and official in the Finance Ministry.²¹⁷

210. *Id.*

211. *Id.*; Vladislav Gorokhov, *Insidious Murder: Natural Reserves in Russia and the Moscow Region*, MOSCOW NEWS, Apr. 15, 1992.

At the request of Prebaikalski's directors, the Ecology Ministry has taken responsibility for the Park because the directors could not prevent regional development plans. Interview with Cook, *supra* note 207.

212. Interview with Cook, *supra* note 207.

213. *Id.*; Interview with Vladimir Sbitnef, Reporter for Izvestia, in Irkutsk, Russia (Oct. 23, 1992).

214. Interview with Cook, *supra* note 207.

215. Ecology and Natural Resources Decree for the Russian Republic, Nov. 9, 1991 [hereinafter Ecology Decree].

216. *Id.*

217. O Ministre Ecologii i Prirodnikh Resursov RSFSR [Decree On the Minister of Ecology and Natural Resources of the RSFSR], Dec. 3, 1991, 49 Vedomosti, item 1735 (1991).

In December 1991, Danilof-Danilian called all of the regional, republic, and oblast forest ministers to a meeting in Moscow to discuss the state of Russian forest management.²¹⁸ Danilof-Danilian repeatedly assured the forest ministers that the structure and functions of local and regional forest ministries would not change. As one minister remarked, Yeltsin had only added a new layer of bureaucracy at the top.²¹⁹ Danilof-Danilian also stated that the Ecology Ministry would not prohibit the Forest Committee from commercial timber harvesting.²²⁰ He said quite explicitly that the Committee's budget would not be sufficient without the proceeds from timber sales.²²¹ Danilof-Danilian repeatedly refused to answer questions about the likelihood or amount of continued financial aid from Moscow to the regional ministries.²²²

In September 1992, Yeltsin approved two decrees which further define the structure of the various ministries and committees within the Russian Government.²²³ Among other changes, the decrees removed the Forest Committee from the Ecology Ministry and renamed the newly independent agency "the Forest Service." Contrary to Danilof-Danilian's predictions the year before, the decrees separate the industrial and profit-making ministries from ministries with responsibility for resource protection.²²⁴ In many cases, as with the Forest Committee, the industrial, profit-making agency (Minlesprom) has been dissolved altogether.²²⁵ When asked where Mislesprom is now, the Ministry's legal counsel replied simply, "in the open market."²²⁶

The decrees present the most sweeping and, potentially, the most constructive changes to Russian forest management to date. If fully implemented, the decrees would remove much of the conflict of interest inherent in the former Forest Ministry. The separation of the industrial and caretaking functions is especially important during the privatization

218. Meeting of the Forest Committee of the Ecology Ministry, in Moscow, Russia, Dec. 10, 1991 [hereinafter Ecology Meeting].

219. Comment of Alexei Dmitrievich Goloushkin, Forest Minister of Buriatia, in Moscow, Russia (Dec. 10, 1991).

220. Ecology Meeting, *supra* note 218.

221. *Id.*

222. *Id.*

223. O Sisteme Tsentral'nikh Organov Federal'noi Iсполnitel'noi Vlasti [Decree of the President of the Russian Federation on the System of Federal Executive Powers], Sept. 30, 1992, 41 Vedomosti, item 2278 (1992) (Russian Federation) [hereinafter Decree 1147]; O Strukture Tsentral'nikh Organov Federal'noi Iсполnitel'noi Vlasti [Decree of the President of the Russian Federation on the Structure of the Central Organs of the Federal Executive Authorities], Sept. 30, 1992, 41 Vedomosti, item 2279 (1992) (Russian Federation) [hereinafter Decree 1148]. For a general discussion of Decree 1147, see Vladimir Orlov, *The Government Lives According to Yeltsin's Laws*, MOSCOW NEWS, Oct. 14, 1992, available in LEXIS, Europe library, MOSNWS file.

224. Decree 1147, *supra* note 223; Decree 1148, *supra* note 223.

225. Decree 1148, *supra* note 223; Interview with Mikhail Geriaev, General Counsel of the Forest Ministry, in Moscow, Russia (Oct. 15, 1992).

226. Interview with Geriaev, *supra* note 225.

process since the wood products industry is likely to be Russia's largest industry for some time.²²⁷ The Supreme Soviet will determine the new Forest Service's budget and will disburse the funds from the general budget, rather than from timber sale proceeds.²²⁸

The decrees do not, however, establish the Ecology Ministry's authority in relation to the newly independent Forest Service. In fact, even while the Forest Committee was within the Ecology Ministry, Goskompriroda's authority to condition or veto Forest Committee decisions was unclear.²²⁹ Presumably, the Ecology Ministry will be able to review Forest Service operations more critically if the Forest Service is an independent agency. On the other hand, the decrees do not set out procedures for resolving disputes or establishing cooperation between the two agencies.²³⁰

B. Russian Federation Forestry Laws

In December 1991, the Russian Federation adopted a comprehensive new law for the protection of the natural environment.²³¹ The law sets out the requirements for an expertisa, the written statement which a government agency must prepare whenever its decision or action could adversely affect the environment.²³² The statement is similar in content to an Environmental Impact Statement (EIS) in the United States,²³³ except that an expertisa must also include statements about the project's social and economic effects.²³⁴ Independent social and ecological organizations may also prepare environmental expertisa, but the law does not provide procedures for reconciling public and private expertisa when the two differ.²³⁵ The Nature Protection Law also contains a narrow citizen suit provision, which allows citizens to seek judicial review of projects or decisions that cause adverse health effects.²³⁶

227. *Id.* The logging, processing, and manufacturing industries have been privatized already, although the forest lands themselves will remain in state ownership. *Id.*; see also discussion on privatization of state property, *supra* notes 130-35 and accompanying text.

228. Interview with Geriaev, *supra* note 225.

229. Interview with Udodov, *supra* note 57.

230. Decree 1147, *supra* note 223; Decree 1148, *supra* note 223.

231. *Zakon Rossiiskoi Federatsii: Ob okhrane okruzhaiushchei prirodnoi Sredi* [Law of the Russian Federation: On the Protection of the Natural Environment], Dec. 19, 1991, 10 *Vedosti*, item 457 (1992) (Russian Federation) [hereinafter *Federation Law on the Environment*].

232. *Id.* arts. 35-36.

233. See National Environmental Policy Act of 1969, 42 U.S.C. § 4332 (1988 & Supp. 1990) (NEPA).

234. *Federation Law on the Environment*, *supra* note 231, pt. V, arts. 35-36. NEPA does not require consideration of social and economic effects in an EIS. *National Ass'n of Gov't Employees v. Rumsfeld*, 413 F. Supp. 1224, 1228-29 (D.D.C. 1976).

235. *Federation Law on the Environment*, *supra* note 231, art. 13.

236. *Id.* arts. 11, 12.

The most important provisions in the Nature Protection Law concern the status and goals of the Federation's national parks and reserves. The law vests authority for the national parks, wildlife reserves, and nature reserves solely in the Ecology Ministry of the Russian Federation.²³⁷ The law sets out the management criteria applicable to each type of protected area and provides for the creation of buffer zones around the areas. Within those zones, development is allowed only to the extent that it is consistent with maintenance of the protected area.²³⁸ The Nature Protection Law does not, however, provide a budget or source of funding for the protected areas, nor does it establish existing area boundaries or criteria for creating future parks and reserves.²³⁹ Until these boundaries are clearly defined, current sales of land plots will tend to create privately owned inholdings within future park or reserve boundaries.²⁴⁰

The Supreme Soviet of the Russian Federation is expected to adopt a new forest management law (the Federation Draft) in early 1993.²⁴¹ The Federation Draft would revise past forestry laws in several respects. The law would provide that management of forest lands and resources be the joint responsibility of the Federation and the autonomous republics, regions, and districts.²⁴² The Russian Government would retain authority, in cooperation with the autonomous republics and local governments, to draft forestry laws and regulations, to establish permissible harvest levels, and to determine a payment scale for forest uses.²⁴³ The law would also vest authority in the Federation Government for forests within the national parks, reserves, greenbelts, and other protected areas.²⁴⁴ No commercial timber harvesting would be allowed in those areas.²⁴⁵ The law would also grant small indigenous groups the right to use the forests for their traditional subsistence or cultural needs.²⁴⁶

The Federation Draft provides some general guidelines for commercial forest users as well. The law provides for forest leases of up to fifty years²⁴⁷ and proscribes any discrimination in the competitive issuance of

237. *Id.* art. 60.

238. *Id.* arts. 61, 63.

239. *Id.* pt. IX.

240. For a discussion of the difficulties associated with national park private inholdings, see John F. Lambert, *Private Landholds in the National Parks: Examples from Yosemite National Park and Indian Dunes National Lakeshore*, 6 HARV. ENVTL. L. REV. 35 (1982).

241. Federation Forest Law Draft, *supra* note 35.

242. *Id.* art. 2.

243. *Id.* art. 5.

244. *Id.* arts. 5, 14, 45.

245. *Id.*

246. *Id.* art. 66.

247. *Id.* art. 28. The Committee does not, however, want to privatize forest lands. Interview with Barsukov, *supra* note 99. The Committee and many environmentalists believe that privatization of Russia's forests would result in higher timber harvest levels and lower environmental standards. *Id.*; Interview with Ignatenko, *supra* note 131; Federation Forest Law Draft, *supra* note 35, art. 28.

those leases.²⁴⁸ Lease prices would be based on Federation laws, but local governments would receive lease fees.²⁴⁹ Timber harvesters must also pay a ten to eighteen percent tax to the Federal Government in order to obtain a license to cut trees.²⁵⁰ The law would prohibit trade barriers and restrictions on access, presumably to ensure that foreigners have equal access and rights to forest uses.²⁵¹ Finally, the law would require forest users to replant forests after timber harvesting or to leave the forests in a condition suitable for natural regeneration.²⁵²

The Federation Draft does not address some of the most serious threats to the country's forests. While many of the new environmental laws appear to increase forest protection, they do not provide specific standards or adequate enforcement mechanisms. The Federation Draft does not provide for criminal penalties, injunctive relief, citizen enforcement, or personal liability for government officials.²⁵³ In addition, the Forest Service's budget is currently only a fraction of the amount needed.²⁵⁴ The shortfall in funding will hamper the restructuring of the service and encourage it to continue commercial timber harvesting. It will also leave the forests vulnerable to fires, pests, and unregulated human uses.²⁵⁵

The Russian Government has not issued price or tax schedules that reflect the costs of past infrastructure investments, the value of non-timber resources, government administration costs, or the depletion of forest lands and particular tree species.²⁵⁶ In fact, the Government continues to subsidize unprofitable timber harvesting by charging lower stump fees

248. Federation Forest Law Draft, *supra* note 35, art. 32.

249. *Id.* art. 29.

250. Interview with Geriaev, *supra* note 225. The tax will be based on the current market value of the wood plus an approximation of the value-added potential of the wood products. An independent tax service has been created to keep track of wood products during the value-added process. *Id.*

251. Federation Forest Law Draft, *supra* note 35, art. 32.

252. *Id.* arts. 30, 33.

253. *Id.* pt. VII.

254. In 1991, the Forest Ministry received approximately one billion rubles (worth between seven and eight million dollars in 1991) to protect about one billion hectares of forest lands. Interview with Barsukov, *supra* note 99. The Forest Committee's 1992 budget was eleven billion rubles (worth about thirty million dollars in 1992), about a fifth of the amount needed. Interview with Geriaev, *supra* note 225. The 1992 budget for the Ministry of Ecology and Natural Resources was only 50% of its 1991 budget. Raymer, *supra* note 64.

255. The Ministry can no longer pay many of its park rangers, wildlife specialists, or scientists. Raymer, *supra* note 64. The Ministry also cannot afford planes or helicopters to fight fires in the Far East. *No One to Fight Forest Fires* (BBC radio broadcast, Mar. 25, 1992), available in LEXIS, Nexis library, BBCSWB file.

256. Interview with Sheingauz, *supra* note 170. According to Sheingauz, timber harvesters pay a flat stump fee based on state "list" prices, a five percent stump tax, and a 7.6% reforestation and protection fee. The Forest Service set the 7.6% fee, which is the amount charged by the Mineral Resources Service, without regard to its applicability to forest management. *Id.*

in areas where access is difficult, such as the mountainous and northern regions of Siberia.²⁵⁷ The Government has adopted an antitrust law to regulate rapidly growing private monopolies²⁵⁸ and organized crime,²⁵⁹ but the law is not very effective in either regard.²⁶⁰ The Government has also failed to provide laws for the regulation and interpretation of contracts.²⁶¹

C. Privatization of State Property

On December 27, 1991, President Yeltsin signed a decree on the delineation of state property in the Russian Federation into federal, state, regional, oblast, and municipal property.²⁶² The Russian Parliament adopted the decree (Property Law) on January 9, 1992.²⁶³ The Property Law divides state-owned property into four general categories of property and designates which level of government has authority over each category.²⁶⁴ The first category includes forests, military assets, water and marine resources, national parks and reserves, energy resources and utilities, and important minerals.²⁶⁵ Property in this category is under the exclusive authority of the federal government, and only the Russian Federation State Committee on Management of State Assets may dispose of it or delegate management authority over it to ministries of the Federation.²⁶⁶ The second, third, and fourth categories consist of federal properties that can be transferred to regional governments, municipalities, and republics, respectively.²⁶⁷

257. Interview with Mironev, *supra* note 75.

258. For example, Russia's Press Minister described three pulp and paper mills (in Kondopoga, Balakhna, and Solikamsk) which are virtual paper producing monopolies, believed to conspire to raise paper prices. *We Are Going Through a Burning Forest: Interview with Mikhail Poltoranin*, SovData Dialine-BizEkon News, Jan. 14, 1992, available in LEXIS, Nexis library, SBE file.

259. Elliott, *supra* note 59, at 14.

260. Zakon Rossiskoi Sovetskoi Federativnoi Sotsialisticheskoi Respubliki O Konkurent-sii i Ogranichenii Monopolisticheskoi Deyatel'nosti Na Tovarnikh Rinkhakh [Law of Russian Federation on Competition and Limitations of Monopolies in the Market System], March 22, 1991, 16 Vedomosti, item 499 (1991) (Russian Republic); Interview with Sheingauz, *supra* note 170. According to Sheingauz, the law does not create an adequate agency or provide sufficient funds to be effectively implemented.

261. Louis Uchitelle, *The Art of a Russian Deal: Ad-Libbing Contract Law*, N.Y. TIMES, Jan. 17, 1991, at A1.

262. Property Law, *supra* note 182; *Text of Parliamentary Resolution on Property Division*, SOVIET BUS. L. REP. (Buraff Publications, Washington, D.C.), Feb. 7, 1992, available in LEXIS, Europe library, SBLAW file.

263. Property Law, *supra* note 182.

264. *Id.* pts. 1-4.

265. *Id.* pt. 1 & app. I.

266. *Id.* pts. 1, 15.

267. *Id.* pts. 1-3.

The Property Law rescinds all other laws and authorities for the disposition of property by the government and other enterprises.²⁶⁸ This rescission is important because it invalidates all transfers of property from ministries or local governments to private entities that occurred prior to adoption of the Property Law.²⁶⁹ The Law also prohibits lease-purchase agreements for lands in the first category.²⁷⁰ The Property Law does not prevent the privatization of small forests that belong to the ministries of agriculture, defense, or various industrial complexes. The new law also allows the privatization of enterprises for wood processing, building materials, construction, and manufacturing industries.²⁷¹

Yeltsin issued a more detailed decree in February 1992 on the mechanisms for transferring state-owned property.²⁷² The decree sets out procedures for the evaluation of property, stock issuance, sale of shares auctions, and the establishment of joint-stock companies.²⁷³ One member of the state property committee explained that the decree was intended to provide a legal basis for the privatization process, to accelerate and standardize the process, and to end the plunder of state property.²⁷⁴ The member also stated that as long as Russia's exchange rate remains very unfavorable, the country will impose restrictions on foreigners' rights to acquire private property in Russia.²⁷⁵

Notwithstanding these concerns, the most recent privatization decree does not impose restrictions on foreigners' rights to acquire property.²⁷⁶ Adopted in June 1992, the decree governs the privatization process through the end of 1992.²⁷⁷ A decree on the sale of land, issued

268. *Id.* pt. 15.

269. Part 15 of the law states that the "authority to dispose of state property, delegated prior to 10 November 1991 to ministries, departments, and other entities, is no longer in force as of the moment of adoption of this decree." *Id.*

270. *Russian Privatization Plan Divides Industries by Degree of Approval Required*, 2 SOVIET BUS. L. REP., Jan. 24, 1992, available in LEXIS, Europe library, SBLAW file [hereinafter *Privatization Plan*]. A lease-purchase agreement grants the right to purchase lands at the end of a lease term.

271. *Id.*

272. *Program of Privatization in Russia* (Official Kremlin Int'l News radio broadcast, Feb. 7, 1992), available in LEXIS, Nexis library, SOVNWS file [hereinafter *Program of Privatization*] (press conference conducted by Yuri Gremitskikh at the Press Center of the Russian Federation Foreign Ministry).

273. *Id.*

274. *Id.*

275. *Id.*

276. O Vvedenii V Deistvia Gosudarstvenoi Programmi Privatizatsii Gosudartstvennikh i Munitsipal'nikh Pridpriatii V Rossiskoi Federatsii Na 1992 God [State Program for Privatization of State and Municipal Enterprises in the Russian Federation for 1992], June 11, 1992, 28 Vedomosti, item 1617 (1992) (Russian Federation) [hereinafter *Privatization Decree*]. For a description of the decree, see *Russian State Privatization Programme*, ROSSIYSKAYA GAZETA, July 9, 1992, available in LEXIS, Nexis library, BCSWB file.

277. *Privatization Decree*, *supra* note 276; Vladimir Orlov, *A Case of 72 Billion Rubles*, MOSCOW NEWS, June 17, 1992, available in LEXIS, Nexis library, MOSNWS file.

at about the same time, also prohibits the sale of forest and agricultural lands, national parks, sites of natural interest, and wildlife reserves.²⁷⁸ The Government will, however, allocate small forest lands to private farmers for multi-purpose agriculture and forestry activities.²⁷⁹

The regional governments have responded to the privatization program in a variety of ways. Regions such as Khabarovsk, which has determined that forest and wood products constitute its most lucrative assets, intend to privatize immediately the lumber, furniture, and paper industries.²⁸⁰ Khabarovsk officials expect that the easy access to low-cost and plentiful raw materials will make such industries desirable to investors even though the industrial equipment is outdated.²⁸¹ Other regions have attempted to circumvent or resist the privatization program, usually in order to privatize more quickly.²⁸² Moscow has responded by annulling any regional decisions which contradict the privatization program,²⁸³ although Moscow lacks the power to enforce such annulments in the outlying republics and regions.²⁸⁴

D. Creation of Free Trade Zones

Concerned that Russia's already low prices will not suffice to attract foreign investors,²⁸⁵ the Government has approved several free trade zones in Siberia and the Far East.²⁸⁶ Modeled after the free trade zones

278. Ob Utverzhdenii Poriadka Prodazhi Zemel'nykh Uchastkov Pri Privatizatsii Gosudarstvennykh i Munitsipal'nykh Pridpriatii [Decree On the Confirmation of the Preparation of Sales of Land Parcels for Privatization of Government and Municipal Enterprises], June 14, 1992, 25 Vedomosti, item 1427 (1992) (Russian Federation). For a description of this Decree, see *Yeltsin Issues Various Decrees, On Bankrupt Enterprises and Other Issues*, 3 RUSIA & COMMONWEALTH BUS. L. REP., June 26, 1992, available in LEXIS, Nexis library, RCBLR file; *Yeltsin Decree on Land Sales During Factory Privatization* (BBC radio broadcast, June 16, 1992), available in LEXIS, Nexis library, BBCSWB file.

279. *Decree of the President of the Russian Federation on Urgent Measures to Implement Land Reform in Russia* (Official Kremlin Int'l News radio broadcast, Dec. 31, 1991), available in LEXIS, Nexis library, SOVNWS file; see also *Ob Organizatsionnykh Merakh Po Provedeniu Zemel'noi i Agropromyshlenoi Reformy V Rossiiskoi Federatsii* [Decree on the Organizational Measures to Carry Out Land and Agribusiness Reform in the Russian Federation], June 27, 1992, 28 Vedomosti, item 1644 (1992).

280. *A Program of Privatization for the Khabarovsk Region*, SovData Dialine-BizEkon News, Mar. 2, 1992, available in LEXIS, Nexis library, SBE file.

281. *Id.*

282. *Press Conference on Privatization, by Vice-Premier Anatoly Chubais* (Official Kremlin Int'l News radio broadcast, June 24, 1992), available in LEXIS, Nexis library, SOVNWS file.

283. *Id.*

284. Statement of Alexei Grigoriev, Russian Forest Specialist, at International Conference on Boreal Forests, sponsored by the Swedish Society for the Conservation of Nature, in Jokkmokk, Sweden (Sept. 30, 1992) (personal observation of author).

285. The Sakha Republic, which produces 99.8% of Russia's diamonds, has had to restrict visitors to some of its districts because of the uncontrolled export of minerals and raw materials. *Russian Diamond-Producing Region Restricts Visits*, supra note 175.

286. See, e.g., *Chita's Gold at Your Disposal*, SovData Dialine — BizEkon News, Aug. 4, 1992, available in LEXIS, Nexis library, SBE file [hereinafter *Chita's Gold*] (describing free

in China, the zones exempt foreigners from taxes on their profits for their first five years of operation; allow foreign companies to register locally, rather than with authorities in Moscow; and suspend duties and import-export tariffs.²⁸⁷ Other zones will offer preferential taxes and tariffs, and allow very long-term leases (up to 70 years) that permit subleases, which are not otherwise allowed under the Federation Forest Law Draft.²⁸⁸ The free economic zone of Chita, south of Lake Baikal, offers minerals, coal, semi-precious stones, and more than two billion cubic meters of timber.²⁸⁹ Foreigners will be able to acquire controlling blocks of stock in Chita's industrial facilities and resource companies.²⁹⁰

Russians hope that the free trade zones will attract investment in the zones' infrastructures and in their technological, processing, and manufacturing facilities.²⁹¹ Since none of the free trade zones have required such investments, however, the more likely outcome is simply a faster pace of resource extraction.²⁹²

E. Cooperation Among the Republics of the Russian Federation

In February 1992, ten of the republics of the Commonwealth of Independent States signed the "Agreement on Cooperation in the Sphere of Ecology and Environmental Protection" (the Agreement).²⁹³ The Agreement sets a valuable precedent not only for the Russian Federation, but also for the international community. The Agreement recognizes the right of individuals in the Federation and in other countries, as well as future generations, to a natural and safe environment.²⁹⁴ The republics agreed to establish an interstate ecological council and to set aside funds to implement coordinated interstate ecological programs.²⁹⁵ The Agreement also declares that successful protection of the ecology and natural resources of the republics will require standardized environmental laws and an interstate database on the environment.²⁹⁶ In addition, the parties agreed to keep an inventory of natural resources, to set scientifically

economic zone in Chita region that offers preferential tax and lease terms for foreign business people working there); *Russian Free Trade Zones*, *supra* note 139 (describing four free trade zones authorized in the Russian Far East).

287. *Russian Free Trade Zones*, *supra* note 139.

288. *Chita's Gold*, *supra* note 286; Federation Forest Law Draft, *supra* note 35, art. 28.

289. *Chita's Gold*, *supra* note 286.

290. *Id.*

291. *Russian Free Trade Zones*, *supra* note 139.

292. *See generally id.*; *Chita's Gold*, *supra* note 286.

293. Agreement on Cooperation in the Sphere of Ecology and Environmental Protection, Feb. 8, 1992 [hereinafter Ecology Agreement]. The text of the agreement was broadcast: *Agreement on Ecological Cooperation* (BBC radio broadcast, Feb. 11, 1992), available in LEXIS, Nexis library, BBCSWB file. The signatories are Azerbaijan, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, and Uzbekistan. *Id.*

294. Ecology Agreement, *supra* note 293.

295. *Id.* art. 4.

296. *Id.* art. 3.

determined limits on the extraction of nonrenewable resources, and to preserve wildlife and biological diversity.²⁹⁷

Although the Agreement's terms are very general, it signals the growing awareness among Commonwealth members of the importance of protecting ecology and the environment.

V

RECOMMENDATIONS

Russian forests face daunting challenges, but they also provide a unique opportunity for Russia and the international community to institute sustainable forestry policies. The following recommendations would facilitate the economic development of Russia's forests while preserving their biological diversity and non-timber resources.

A. *The Resource Base*

The first step which Russia must take is to conduct accurate surveys and value assessments of its forests.²⁹⁸ The current dearth of information about the timber base renders any projections of sustainable timber harvesting rates highly speculative.²⁹⁹ In addition, accurate assessments of the size and health of the timber base would enable the Government to tailor its fire and pollution monitoring programs to local conditions and to develop priorities for replanting and harvesting programs.³⁰⁰

Russia must also inventory and value the non-timber resources of the forests.³⁰¹ The government does not currently include the value of non-timber resources, such as berries and nuts, in its economic calculation of forest values, since local residents usually harvest those goods.³⁰² Yet, the value of locally consumed non-timber products often exceeds that of the timber harvested.³⁰³ Forest resource assessments should also include aesthetic, spiritual, and public health values, such as climate and erosion control.³⁰⁴ Valuations of the non-timber resources should also consider the biological and genetic diversity of the forests, and their potential to provide the bases for medicines, natural pesticides, toiletries,

297. *Id.* art. 2.

298. Interview with Vladislav Alekseev, Assistant Director of the Institute of Forest and Timber Research, Russian Academy of Sciences, in Jokkmokk, Sweden (Oct. 2, 1992). Alekseev estimates that such a survey would cost fifteen to thirty thousand dollars. It should include international scientific teams, computer support, and training for the Russians in the uses of satellite images. *Id.* See also *supra* part I.A.

299. Interview with Grigoriev, *supra* note 43; see BARR & BRADEN, *supra* note 3, at 28.

300. See *supra* text accompanying notes 87 and 201.

301. See Convention on Biological Diversity, June 5, 1992, 31 I.L.M. 818, U.N. Doc. No. 92-7807.

302. LEMESHEV, *supra* note 52, at 141.

303. *Id.* at 86.

304. *Id.* at 16-17.

dyes, and cleaning products. Finally, non-timber assessments should include the value of the non-timber biomass (moss and decaying vegetation), which contains far more carbon than do the trees in Siberian forests.³⁰⁵

Accurate resource assessments also require ongoing studies and programs to monitor the forests.³⁰⁶ In addition to monitoring the effects of timber harvesting and forest fires, Russia should monitor species' habitats, movements and survival rates; ecosystem health and the maintenance of genetic diversity; water and air quality; local economic and cultural impacts; and net changes in the resource base.³⁰⁷

B. The Legal Structure

The most important step Russia can take to improve its forestry laws is to separate the government agency responsible for forest protection from the enterprises which profit economically from forest exploitation. The Forest Service and its local administrative branches should be prohibited from all commercial timber harvesting, and their employees should not be allowed to hold financial interests in such enterprises. New forestry laws should not only limit the permissible functions of the Forest Service, but they should provide clear conflict of interest regulations. Although Russians have considerable experience with the conflicts inherent in centralized planning, they are less familiar with the importance of separating government officials from private enterprises.³⁰⁸ A code of government ethics should provide clear standards and serious penalties for conflicts of interest violations.³⁰⁹ Such regulations would, hopefully, stem widespread corruption and insider trading.³¹⁰

Other reforms could also increase the accountability of government agencies and officials. For example, environmental laws and regulations should include broad provisions for public access to information and citizen suits to enforce environmental regulations. Individual officials should be personally liable when they fail to implement or enforce those laws and should receive rewards or a percentage of penalties imposed.

305. Interview with Alekseev, *supra* note 298. Alekseev also stated that non-timber biomass, especially moss, also produces more oxygen than the standing trees. *Id.*; see also Gregori Kuznetsov, VOSTOCHNO-SIBIRSKAIA PRAVDA, May 25, 1991, at 12.

306. Convention on Biological Diversity, *supra* note 301, art. 7.

307. See generally GLOBAL BIODIVERSITY STRATEGY, *supra* note 8.

308. See generally Hiatt, *supra* note 61 (describing questionable practices of former communist officials who used state funds and property to create personal fortunes).

309. See, e.g., Administrative Procedure Act, 5 U.S.C. § 556(b)(3) (1988) (requiring agencies to determine matters of personal bias as part of record and decision in adjudications); Federal Ethics in Government Act, 28 U.S.C §§ 591-99 (1988) (providing for appointment of independent counsel to investigate allegations of criminal conduct by federal officials).

310. For a discussion of corruption and insider trading, see *supra* notes 61-62 and accompanying text.

The Forestry Service and the finance ministries must also issue regulations for pricing and taxing that are suited to a free market economy. At present, too many business activities operate without taxation or regulation.³¹¹ The price of forest leases should reflect the full costs of replanting or replacing resources, the value of non-timber resources which are lost, and the relative values of different tree species.³¹² The Government should also discontinue timber industry subsidies created by artificially low prices in underdeveloped areas.³¹³ The Government should set minimum bid prices high enough to recover all its costs.³¹⁴ The Government should also impose a tax on forest use³¹⁵ to reflect the diminution of forest resources worldwide and the impossibility of replacing certain forest resources.

As the number of foreign enterprises increases, the Government should protect the long term resource needs of local populations, including traditional indigenous cultures. The Government should require foreign companies to provide updated technology and equipment, as well as investments in local social programs. Such a policy would promote the development of sustainable communities with a proprietary interest in the local resource base, ideally replacing migrant enterprises interested only in quick resource extraction and exploitation. Russia should also create property interests in its forests' genetic resources. These interests could provide incentives for conservation and reward local firms serving as information brokers for international companies.³¹⁶ The Russian Government could also require foreign joint enterprises to hire a certain percentage of their workers from the local work force, ban the export of unprocessed logs, and require investments in local wood processing facilities.³¹⁷ To prevent foreign timber companies from avoiding their own domestic environmental regulations, the Russian Government should require each foreign timber and wood processing company to comply with the environmental laws of its country of incorporation.

Russia must also strengthen its own environmental laws. Forestry laws should encourage harvesting methods which maintain the natural ratios of different tree species and ages. The Russian forestry law should also prohibit large-scale clearcutting and the establishment of single-spe-

311. See *supra* notes 57-60, 170-72, 197 and accompanying text.

312. ROBERT REPETTO, *THE FOREST FOR THE TREES? GOVERNMENT POLICIES AND THE MISUSE OF FOREST RESOURCES* 32-33, 36 (1988).

313. *Id.* at 32-33. For a study on the effects of subsidies for U.S. National Forests, see RANDAL O'TOOLE, *REFORMING THE FOREST SERVICE* at xii, 235-37 (1988).

314. REPETTO, *supra* note 312, at 34.

315. Nicholas Guppy, *Tropical Deforestation: A Global View*, 62 *FOREIGN AFF.* 928, 961 (1984).

316. *GLOBAL BIODIVERSITY STRATEGY*, *supra* note 8, at 43.

317. Scott & Gordon, *supra* note 25, at 17.

cies forests, which are vulnerable to disease.³¹⁸ Protecting forests' biological diversity also reduces the likelihood of endangering forest species and restricting timber harvesting in order to protect those species.³¹⁹

Russia must also define the legal authority of national parks and nature reserves as soon as possible.³²⁰ A law on protected areas should detail objectives and management criteria, including the permissible level of development, for the national parks and nature reserves.³²¹ The Government should designate protected areas large enough to protect important ecosystems and encourage the adoption of zoning laws which provide "buffer zones" around the protected areas.³²² Existing parks and reserves should be expanded and connected by "bio-corridors" to allow for wildlife migration.³²³ In order to protect some of its remaining pristine rivers, Russia could adopt legislation similar to the American Wild and Scenic Rivers Act.³²⁴ The Government must also provide a reliable source of funding for the protected areas' budgets.

The Russian Government has a unique opportunity to design the management of its forests and protected areas on the ecosystem level. It could then avoid the fragmentation of resource management which begets federal and state agencies in the United States. Russia, unlike the United States, has a blank slate on which it can plan its protected areas to reflect the natural movements of wildlife and water. Forestry and other environmental laws should establish interagency and interregional councils to coordinate between different regions and republics which share responsibility for particular ecosystems.³²⁵

To receive the support of neighboring residents, the Government should promote sustainable uses of the protected areas, such as responsible ecotourism³²⁶ and the development of extractive reserves, which exploit forest resources without damaging their ecological balance.³²⁷ The Government should act in full cooperation with local indigenous groups that have traditionally used the forests in this manner.³²⁸ Russians al-

318. GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 39.

319. *Id.*

320. See Convention of Biological Diversity, *supra* note 301, art. 8.

321. GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 119-22.

322. See Convention on Biological Diversity, *supra* note 301, art. 8(e). Such zones would allow for greater development than in the protected area, but in a manner which would not defeat the area's purposes. GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 128-131. See, e.g., the Tongass Timber Reform Act, 16 U.S.C. § 539d (1988), which provides 100-foot no-cut buffer zones along anadromous fish streams.

323. Petrof, *supra* note 6, at 27.

324. Wild and Scenic Rivers Act of 1968, 16 U.S.C. §§ 1271-87 (1988).

325. GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 104.

326. See Nikol'skii et al., *supra* note 206, at 6.4.

327. LEMESHEV, *supra* note 52.

328. See generally Agenda 21, July 10, 1992, Ch. 26, U.N. Doc. No. A/Conf. 151/4 (1992) ("Recognizing and Strengthening the Role of Indigenous People and their Communities.") Chapter 26.3 requires governments to act "in full partnership" with indigenous peoples to

ready export sable furs, berries, fern greens, fish, and even water from Lake Baikal.³²⁹ They also gather and sell thousands of tons of Siberian pine nuts annually.³³⁰ A total of more than five million tons of edible products are derived from the forests each year.³³¹ The Government should encourage the development of these industries with the same enthusiasm that it encourages timber industry growth.³³²

C. *International Aid for Russian Forests*

In the past year, the Group of Seven industrial nations (G-7), the International Monetary Fund (IMF), and the World Bank have promised significant amounts of monetary and technical aid to Russia.³³³ Some of the aid should be used to develop sustainable forestry industries in Russia, provide fire protection, and attract more efficient technologies.³³⁴ The remaining aid should, at least, not support projects that will harm Russia's environment or diminish forest resources that could otherwise be the basis for sustainable industries.

The World Bank has agreed to loan Russia \$600 million for development assistance, which will focus primarily on agriculture, environment, information technology, and other technical assistance.³³⁵ The European Bank for Reconstruction and Development (EBRD) will help develop the programs.³³⁶ In the past, the EBRD has not incorporated environmental concerns into its review process, nor has it made environmental impact statements and other information available to the public.³³⁷ A recent amendment to the International Development and Finance Act strengthens the environmental impact assessment proce-

protect their communities from environmental degradation. *Id.*

329. Interview with Khamarkhanova, *supra* note 97.

330. LEMESHEV, *supra* note 52, at 133.

331. PRYDE, *supra* note 12, at 123.

332. For a discussion of government encouragement of the timber industries and other industries, see *Russian Free Trade Zones*, *supra* note 139; see also *Speech by President Yeltsin to Canadian Business* (BBC radio broadcast, June 22, 1992), available in LEXIS, Nexis library, BBCSWB file (reporting Yeltsin's wish to grant concessions for forest resources).

333. *Summit Declaration*, *supra* note 1. The G-7 have pledged \$24 billion in aid to Russia. *Issues to be Discussed at Group of Seven Summit*, Reuter Library Report, July 4, 1992, available in LEXIS, Nexis library, LBYRPT file. See also *International Monetary Fund News Conference*, Federal News Service, Aug. 6, 1992, available in LEXIS, Nexis library, LBYRPT file (announcing that IMF will extend one billion dollars in credit to Russia); *Banks First Loan to Russia Will Hit Record \$600 Million*, WORLD BANK WATCH, July 20, 1992, at 1 [hereinafter *Banks First Loan*] (reporting that the World Bank's first loan to Russia totals \$600 million).

334. See *Convention on Biological Diversity*, *supra* note 301, arts. 8, 16, 18.

335. *Banks First Loan*, *supra* note 333; See also The World Bank, *Aide-Memoire on the Environmental Sector Project Preparation Mission* (Oct. 31, 1992) (unpublished draft, on file with the author).

336. *Id.*

337. HOUSE COMMITTEE ON APPROPRIATIONS, FOREIGN OPERATIONS, EXPORT FINANCING, AND RELATED PROGRAMS APPROPRIATIONS BILL, 1993, H.R. REP. NO. 102-585, 102d Cong., 2d Sess. 18-19 (1992) [hereinafter HOUSE REPORT ON FOREIGN AID].

dures which the EBRD must follow.³³⁸ In addition, the United States Congress has exerted pressure on the development banks to allow greater public participation, to include environmental factors in their lending policies, and to conduct systematic reviews of their environmental policies.³³⁹

The World Bank's loan followed the IMF's release of \$1 billion in credit for Russia.³⁴⁰ The IMF could shape its usual grant conditions — removal of subsidies, liberalization of prices, and encouragement of competition — to aid in the conservation of forests.³⁴¹ In particular, the IMF could require the preparation of accurate resource valuations and the removal of subsidies that encourage unprofitable timber harvesting. The IMF, like individual creditor nations and institutions, could also condition credit and debt restructuring on Russia's preservation of designated forests.³⁴² In this "debt-for-nature" swap, the creditor would forgive Russian debt in exchange for Russia's investment in conservation projects.³⁴³

The Global Environment Facility (GEF), cosponsored by the United Nations and the World Bank, could also provide millions of dollars to preserve Russian forests.³⁴⁴ GEF, which was formed to protect biodiversity and prevent global warming, has already provided 4.5 million dollars to Poland to preserve forests near the Byelorussian border.³⁴⁵ The rich forests around Lake Baikal and in the Russian Far East³⁴⁶ would be excellent candidates for such a grant.

The international community can employ several other means to help protect Russian forests. The Sustainable Development Commission, to be established by the United Nations in 1993, will provide an international review process and a program to monitor the world's environment.³⁴⁷ The Convention on Biological Diversity, adopted at the United

338. Pub. L. No. 101-240, 103 Stat. 2511 (1989) (codified at 22 U.S.C. § 262m-7 (Supp. II 1990)).

339. HOUSE REPORT ON FOREIGN AID, *supra* note 337.

340. *Banks First Loan*, *supra* note 333.

341. *Id.*

342. See generally Catherine O'Neill & Cass R. Sunstein, *Economics and the Environment: Trading Debt and Technology for Nature*, 17 COLUM. J. ENVTL. L. 93 (1992) (discussing debt-for-nature swaps and favoring technology-for-nature swaps).

343. See also GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 74-75 (describing "debt-for-nature" swaps as a method of addressing conservation needs). Since 1987, 18 debt-for-nature swaps have been agreed upon, which relieved \$98 million of debt and generated \$61 million in conservation funds. *Id.* at 75.

344. GLOBAL ENVIRONMENTAL FACILITY, PARTNERS IN GLOBAL SOLUTIONS 5 (1991).

345. *World Bank Grants \$4.5 Million to Poland's Biodiversity Project*, 14 Int'l Env't Rep. (BNA) 693 (Dec. 18, 1991).

346. Scott & Gordon, *supra* note 25, at 17; see John Massey Stewart, *The Great Lake is in Great Peril*, NEW SCIENTIST, June 30, 1990, at 62.

347. *Selection of New UNEP Chief Linked to Sustainable Development Body*, 15 Int'l Env't Rep. (BNA) 784 (Dec. 2, 1992).

Nations Conference on the Environment and Development (UNCED) in June 1992, requires monitoring of plants and wildlife and resource plans which protect biodiversity.³⁴⁸ The Biodiversity Convention also requires countries which profit from Russia's and other nations' genetic resources to provide compensation by sharing their research, technology, or profits.³⁴⁹

In addition, enforcement of several existing treaties could help protect Russian forests. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),³⁵⁰ which prohibits the trade or overexploitation of endangered species, could be used to stem brown bear and Siberian Musk deer poaching in the Russian Far East.³⁵¹ The Convention on the Conservation of Migratory Species of Wild Animals requires signatories to protect endangered migratory species and cooperate to conserve those that could become endangered.³⁵² The treaty, which already applies to 51 migratory species, could be amended to include additional birds and mammals that depend on Russian forests, as well as the anadromous fish that migrate between Russia and China or Alaska.³⁵³

Finally, international trade agreements with Russia should not prevent or impair the enforcement of Russia's domestic environmental regulations and efforts to develop sustainable industries.³⁵⁴ International trade agreements should explicitly recognize that measures to conserve forests also protect public health and welfare.³⁵⁵ Restrictions, such as Irkutsk's dual-pricing scheme,³⁵⁶ do not constitute disguised forms of protectionism. In addition, future agreements should facilitate the exchange of environmental technologies and data.³⁵⁷ Russia would then be able to take measures to conserve its forests, such as importing more

348. Convention on Biological Diversity, *supra* note 301, arts. 7-10. The Convention was signed by all participating nations except the United States. Paul Lewis, *The Earth Summit*, N.Y. TIMES, June 15, 1992, at A1.

349. Convention on Biological Diversity, *supra* note 301, arts. 15, 20, 21.

350. March 3, 1973, 27 U.S.T. 1087, 993 U.N.T.S. 243.

351. Judy Mills, *Milking the Bear Trade*, INT'L WILDLIFE, May/June 1992, at 38.

352. Convention on the Conservation of Migratory Species of Wild Animals, June 23, 1979, 19 I.L.M. 15.

353. *See id.*, app. I; *see generally* Alfred DeCicco, *Long-Distance Movements of Anadromous Dolly Varden between Alaska and the U.S.S.R.*, ARCTIC, June 1992, at 120; Interview with Boris Voronof, Assistant Director of the Khabarovsk Institute of Water and Ecology of the Russian Academy of Science, in Khabarovsk, Russia (Oct. 29, 1992).

354. For instance, the General Agreement on Tariffs and Trade (GATT), Oct. 30, 1947, art. 20(g), 61 Stat. A3 (vol. 5), 55 U.N.T.S. 188, allows countries to enact measures to conserve exhaustible natural resources, if paired with limitations on domestic consumption, yet a GATT panel prevented the enforcement of the United States ban on tuna imports that endanger dolphins. Robert F. Housman & Durwood J. Zaelke, *The Collision of the Environment and Trade: The GATT Tuna/Dolphin Decision*, 22 ENVTL. L. REP. (Envtl. L. Inst.) 10,268 (1992).

355. GLOBAL BIODIVERSITY STRATEGY, *supra* note 8, at 57.

356. *See supra* note 192 and accompanying text.

357. *See* Convention on Biological Diversity, *supra* note 301, arts. 15-19.

efficient foreign technology and equipment, to benefit both its trade balance and its environment.

VI CONCLUSION

Russian forests are disappearing at an alarming rate, and deforestation seems likely to accelerate as the country develops a free market economy. Many Russians now view their forests as convertible currency and massive timber sales as a means to raise desperately needed funds.³⁵⁸ Russia is currently rewriting many of its forestry and business laws, but legal reforms have not kept pace with economic deregulation. As the national and regional governments struggle to define their respective powers, Russian officials, private timber companies, and foreign joint ventures are taking advantage of gaps in authority to establish their own claims to Russian forests.

Countries with far less severe economic problems have chosen short-term forest exploitation over long-term environmental planning.³⁵⁹ Yet, nonsustainable forest exploitation is also bad economic planning. Despite their vastness, Siberian forests are very fragile and will not regenerate quickly or with the same ecological balance after they are cut.³⁶⁰ Increased timber harvesting could permanently destroy one of Russia's, and the world's, most valuable resources.

Russia must reform its forestry laws and natural resource policies to protect its forests from economic deregulation. Price and tax schedules which reflect the forests' value and rarity, an independent government agency which enforces explicit environmental regulations, and expansion of the national park and nature reserve systems would all help to protect Russian forests. Russia should also demand financial and technical assistance from the international community for the preservation of its forests. As the world's forests disappear, conservation of Russian forests will prove to be one of the best investments in Russia's economy and the world's environment.

358. Glenn, *supra* note 55.

359. See generally REPETTO, *supra* note 312.

360. Interview with Furiaev, *supra* note 45; Interview with Tulokhonov, *supra* note 143.