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# The Soviet Region, The Environment, and U.S. National Security

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## ABSTRACT

### The Soviet Region, The Environment and U.S. National Security

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The region of the world formerly known as the Union of Soviet Socialist Republics has been undergoing a dramatic transformation. The fall of communism and the collapse of the planned socialist economy have ended the Cold War era of history. The new world order which will evolve is yet undefined. Optimists (moralists) claim it will bring a new opportunity for global cooperation and peace. Pessimists (realists) argue that the new multi-polar world may well be a more dangerous place, characterized by ethnic and regional conflicts (Kissinger A21).

This paper conveys an aspect of national security planning which is rarely discussed - environmental policy. I intend to make four fundamental points. First, environmental pollution is an international problem requiring international solutions. Second, environmental issues are integral to the prospect of economic vitality. Third, the Soviet Union has a history of environmental abuse and is now paying an economic and social price which must be reversed. And finally, since regional stability is an important U.S. interest, the U.S. should be concerned and helpful in resolving the Soviet region's environmental crisis.

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## FORWARD

Due to the current political restructuring of the former Soviet Union, it is possible to get confused with regional terminology. For my purposes in this paper, terms such as the Soviet Union, USSR, the Soviet region, and the Commonwealth, all refer to the territory formerly known as the Union of Soviet Socialist Republics. Since the dates of my references span more than 25 years, these terms are being used interchangeably.

## INTRODUCTION

The region of the world formerly known as the Union of Soviet Socialist Republics has been undergoing a dramatic transformation. The fall of communism and the collapse of the planned socialist economy have ended the Cold War era of history. The new world order which will evolve is yet undefined. Optimists (moralists) claim it will bring a new opportunity for global cooperation and peace. Pessimists (realists) argue that the new multi-polar world may well be a more dangerous place, characterized by ethnic and regional conflicts (Kissinger A21).

Under either scenario, the U.S. must remain an active participant in the world community. Regional disputes, particularly in the Soviet region, which in a worst case could involve nuclear weapons, are of vital national interest. Therefore, the U.S. must be involved and supportive in the Soviet region's peaceful political and economic evolution.

This paper conveys an aspect of national security planning which is rarely discussed - environmental policy. I intend to make four fundamental points. First, environmental pollution is an international problem requiring international solutions. Second, environmental issues are integral to the prospect of economic vitality. Third, the Soviet Union has a history of environmental abuse and is now paying an economic and social

price which must be reversed. And finally, since regional stability is an important U.S. interest, the U.S. should be concerned and helpful in resolving the Soviet region's environmental crisis.

#### BACKGROUND

The republics of the former Soviet Union have denounced their central government, largely as a result of the collapse of the communist party's planned, socialistic economic system. Political and economic restructuring is now taking place in an unprecedentedly rapid way. The final shape of the region is hard to predict, but the formation of the Commonwealth of Independent States (CIS) gives hope for peaceful regional reorganization. To date, the Commonwealth members have agreed in principle to share economic and strategic security interests; details of which have not been entirely resolved. The members may ultimately share foreign policy as well.

A new economic philosophy is evolving in the region. It appears clear that some form of market economy will emerge. But the economic troubles of the region are so vast and complex that it is difficult to imagine when a recovery will occur.

An unreliable monetary system has induced runaway inflation and necessitated a barter system for the transfer of goods. The trade between republics of raw materials and finished goods

required under the planned Soviet economy is now stymied by inter-republic disputes and resultant trade barriers. The shortage of basic consumer goods - food, fuel, refrigerators, washing machines - is getting worse (Dobbs A18). Although this winter has passed in relative calm, the future of public support for reform is still uncertain.

Compounding this already difficult situation is the fact that long and bitter ethnic unrest is surfacing as a result of the new democratic freedoms in the region. There are over 100 ethnic groups (22 of over one million people) in the former Soviet Union who speak over 100 languages (Medish 30, 57). No republic is monolithic.

According to the Central Intelligence Agency, the potential for social unrest and even war in the region is obviously high (Lardner A31). The fundamental issue which must be rectified to produce regional stability is the economy. Only until the peoples of the region can satisfy their survival requirements and develop some confidence that future economic prosperity is probable will they establish some confidence in their political institutions, however they should evolve. Therefore regional stability is as much (possibly more) a function of economic reform as it is political reform.

One aspect of economic recovery which has not been popularly addressed is environmental policy. As Silvertein has noted, "for decades, Soviet leadership has sacrificed air, water and soil

quality to industrial development....The economic results of this shortsightedness are now becoming apparent" (5). Similar to other industrializing nations, the Soviet Union has placed priority on economic development often ignoring ecological protection. The fact that its territory is so vast, and many of its natural resources are far from population centers, allowed this pattern to go on relatively obscure for many years.

The magnitude of the environmental degradation in the Soviet region is unimaginable and the consequences in terms of public health and economic well-being are only now coming into focus, but seem staggering at best. Environmental recovery will be incredibly expensive. "The bill from the Chernobyl accident alone is expected to exceed \$350 billion ..." (French 333).

As this paper will describe, the Soviet Union has a history of environmental abuse. The Chernobyl disaster is but one of many Soviet environmental tragedies. The cost of environmental reconstruction will be extremely high. As a strategy is developed for regional recovery the environment must be an integral component. In its current environmental state, the region cannot support an effective economic recovery program. "A progressively more degraded national landscape throughout the country (USSR) is eroding worker morale and productivity in scores of industries" (Silverstein 5). The fact that 15 independent states must now consort to address the environmental issue will make the task even more difficult.

## THE ENVIRONMENT - AN INTERNATIONAL ISSUE

An environmental pollution aspect which makes it a potential security issue is that it is easily transferred across international boundaries. When air is fouled, or ground water is contaminated, or rivers dirtied, neighboring communities, down-wind or down-stream, must live with the effects. Those communities can often reside in neighboring countries. The prevention, and cleanup, of such conditions must, then, be a cooperative, international effort. The lack of cooperation may well result in tension, and ultimately, conflict.

Probably the most striking example of the international nature of environmental pollution is the accident at Chernobyl. On April 25-26, 1986, an explosion and fire in the nuclear power plant in that little Russian town spewed radiation over a large area of Northern Europe. That incident has produced a disaster without parallel.

Lofstedt reports that an estimated 400 million people have been exposed to the radiation. For years, the Soviet government put a tight lid on information about the incident. It officially confirmed 31 deaths directly resulting from the incident (3). Recently, Yuri Shcherbak, a Ukrainian deputy, estimated that 300 people died in the accident. Dr. Robert Peter Gale of UCLA, a U.S. Chernobyl expert, believes that there may be between 5,000 and 150,000 excess cancer cases worldwide due to the incident

(Bogert 31).

In the first few months after the accident, over 100,000 people from a 25 kilometer radius around Chernobyl were evacuated. Early reports indicated that Byelorussia received the bulk of the fallout. But ground deposits which exceeded health guidelines were found as far as 200 kilometers from the nuclear plant (Lofstedt 2-5). Soviet officials belatedly revealed that a much larger area, to include parts of the Ukraine and Russia, were contaminated. So another 200,000 people will be uprooted by the end of 1992. "Byelorussian officials believe that more than 2 million people should be evacuated from lands poisoned by radiation." (French 336)

Chernobyl has created significant political backlash within the Soviet Union. "Perhaps [its] most lasting legacy is the deep political mistrust left by...years of misinformation, or no information at all (Bogert 31)." But beyond the internal consequences, Chernobyl demonstrates the international nature of such an environmental catastrophe.

Shortly after the accident, dairy cattle from a large area around Lake Constanze in Germany were removed due to iodine-isotope contaminated pasture. The German population experienced considerable psychological stress related to the possibility of consuming harmful dairy products. As a result, consumer habits have changed and a significant economic burden has been placed on the German dairy industry.

Sheep farmers in the Cumbrian Mountains of northern England have also suffered from the Chernobyl incident. The deposition of cesium 137 in that mountainous pasture land resulted in the British government placing a 3-week ban on the movement or slaughter of 4 million sheep on 7000 farms. The ban was then indefinitely extended due to confusion among scientific and government policy makers regarding the hazards involved. As in the case in Germany, a significant economic disruption to the British farmers in the Cumbrian region was caused by an accident in the Soviet Union.

A similar example of political and economic consequences was experienced by the reindeer herders of Sweden. Contamination of their pasture lands caused a government ban on the use of reindeer meat which is a staple of the Swedish population (Lofstedt 4).

The Chernobyl disaster clearly demonstrates the international nature of environmental pollution. It has impacted literally millions of people from several countries. The irresponsible actions of the Soviet government have likely caused health risks, and possible deaths, on an international scale. As the former Soviet Union dissolves into 15 independent states, another Chernobyl incident may have far more serious consequences. Tensions between Russia and Ukraine, for example, already exist over trade, security responsibilities, and currency issues. Regional conflict is certainly plausible should a

incident endangering Ukraine citizens occur.

While Chernobyl may be the most dramatic example to date, it is by no means the only. The severe pollution of the Black Sea has created another international environmental crisis. Fed by over 60 rivers and streams which deliver waste from over 160 million people, the Black Sea's ability to support an historically rich sea life population has dramatically diminished. Three of the four largest rivers - the Don, Dnieper, and Dniester - drain basins from within the former Soviet Union. These three river basins are heavily industrialized and are considered one of the most polluted areas in the world. Included in the contaminated effluent from the Dnieper is cesium 137 and strontium from the Chernobyl area. The fourth, the Danube, is polluted with sewage and waste from eight countries.

"The Ankara government says that between 1987 and 1989, the Turkish Black Sea [anchovy] catch has dropped almost 95%, from 350,000 tons to less than 15,000 tons...(Simons 18)." Dramatic drops in the sturgeon population have resulted in a loss of fishing jobs and a scarcity of Volga caviar. Black Sea beaches, once very popular vacation spots, are often unusable because of pollution (Silverstein 6).

Due to years of environmental neglect and a lack of international resolve among the six nations that share the Black Sea coastline, significant negative economic, health, and environmental impacts are underway.

## THE ENVIRONMENT - AN ECONOMIC ISSUE

One of the first scientists to recognize and study man's interrelationship with his environment was a Russian, Vladimir I. Vernadsky. Spanning the late 19th and early 20th century, he addressed at great length how the increasing population of man and man's rising use of industrial processes would impact on nature. He also developed the concept of noosphere. This is a "biosphere rationally controlled and managed by humans (Yanshin 7)." In 1926, he published The Biosphere which coined that term. His concepts were widely read and respected.

This is an ironic fact, since the Soviet region is one of the most polluted in the world. Koutaïssoff states that there are ideological reasons for this. Marxist theory taught that natural resources had no intrinsic value. That value was only added when those resources were used in production. Under Stalin's interpretation of Marx, it was widely believed that adverse environmental impact was a capitalist phenomena. Since capitalism was focused on maximizing profit, concern for the environment was secondary. Socialism, on the other hand, with its "planned and rationally managed economy," would achieve both social/economic development and a properly managed biosphere (11-12).

At the twenty-second congress of the Communist Party of the Soviet Union, in 1961, it was confidently asserted that

"communism elevates man to a tremendous level of superiority over nature and makes possible a greater and fuller use of its inherent forces"(Singleton 2).

Singleton explains that the early mindset for ignoring nature was due to four factors. First, for several decades immediately following the revolution, the Soviet government's all consuming priority was expanding the industrial base. Second, the inexperience and ill training of managers has led to deeply ingrained inefficient processes. Third, the cumbersome and highly compartmentalized bureaucracy has stymied much of the attempts to deal with environmental issues. And fourth, the sheer size of the Soviet Union, one-sixth of the earth's surface, has led to the belief that the country's natural resources were limitless (3).

Reality has slowly become apparent to the Soviets. In 1963, V. A. Chivilikhin wrote an article in the Soviet magazine October describing the construction of two pulp and paper combines on the shores of Lake Baikal in Siberia. Lake Baikal is the world's largest fresh water lake. Cherished by many Russians due to its natural beauty, it has significant scientific interest because it's ecology hosts over 2400 species of plants and animals. Two-thirds of these live nowhere else in the world (French 334).

Chivilikhin revealed that these pulp plants would have a devastating effect on the local ecology. This widely read article started an awareness throughout the Soviet Union that

"progress had begun to seriously menace nature...(Komorov 3)."  
He exposed the fact that for four years a host of scientific and environmental groups had opposed the projects. But the State Planning Committee (GOSPLAN) of the USSR and the Committee on Forestry paid no attention. This article can be credited with beginning the environmental awareness of the Soviet populace.

While many academic discussions took place during the 1970s, no solution was found to "the very basic practical problem of how to achieve further economic growth without accelerating the likely irreversible destruction of nature (Koutaissoff 14)." In 1975, the Soviet government restricted the publication of any information concerning the state of the ecology (Komorov 6). The government wanted to stop any resistance to "progress" before it could begin. Very little reliable information about the Soviet environment has been available since.

A distinct change in attitude occurred when Mikhail Gorbachev came to power in 1985. Having a background in agriculture, he demonstrated a special concern for the environment from the beginning of his reign. This concern was publicly expressed in January 1989 when President Gorbachev spoke to the United Nations General Assembly. He stated that "international economic security is inconceivable unless related not only to disarmament but also to the elimination of the threat to the world's environment (Thompson, Dick 68-69)."

In January 1990, Moscow hosted a conference of the Global

Forum on Environment and Survival. Over 700 scientists, environmental activists, religious leaders and politicians attended. During a speech to this group Gorbachev admitted that only recently "the entire and vital significance of the ecological problem has been realized in the Soviet Union at the policy level (Gorbachev 13)." While it is clear that the Soviet leadership has known of their environmental crisis for many years, President Gorbachev's public recognition of it and his commitment to policy reform was highly encouraging. Under Gorbachev's leadership, as free flow of information improved, environmental awareness and concern became as widespread in the Soviet Union as in most other countries (Singleton 11).

#### The Cost of Environmental Neglect

At least some in the Soviet government have come to realize that the communist cost accounting equation has been in error. "...Air and water are treated by the Russians as 'free' goods....A Russian plant manager is charged for labor, raw materials, and capital equipment, but not for the social costs of production arising from air, water, noise, and other pollution (Thompson, Don 23)." As occurred in the United States in the 1960-1980 period, these diseconomies are being recognized and legislation to protect the environment and enforce cleanup is

being enacted. These efforts will be discussed in the next section.

There are several diseconomies, or social costs, result from a failure to protect the environment (Thompson, Don 8-19). These include the costs for cleanup of contaminated areas. For example, Ukrainian deputy Yuri Shcherbak has estimated that the ultimate cost of the Chernobyl cleanup will exceed \$415 billion (Bogert 31).

Health costs associated with the degraded environment is another significant social cost. In addition to the death caused by Chernobyl, a dramatic increase in cancer is expected among the thousands of people who have been exposed to the fallout. Over 5.4 million people were given prophylactic iodine as a defense against iodine 131 accumulation in the thyroid gland.

In 1989, Alexei Yablokov, the deputy chairman of the Supreme Soviet's ecology committee, declared that "as many as 50 million Soviet citizens live in areas where pollution levels are at least ten times as high as state safety standards permit." In parts of the Aral Sea region, two-thirds of the populace have reported environmental-related health problems. This area is heavily contaminated by chemical fertilizers and pesticides (Garelik 64).

Profit and efficiency certainly suffer from degraded environment. Cited earlier are the effects on Black Sea fishing and tourism due to its polluted state. This is certainly true for all segments of the economy, a work force whose health is

failing degrades the efficiency of production.

As Soviet legislation protecting the environment builds, banking and insurance costs will increase. These institutions take on greater risk for financing polluting and health damaging enterprises.

Western industrialized nations have been addressing these issues for years. The Soviet Union, and its satellite nations, with their strict central planning and ability to control information, lag behind the western world in environmental protection by probably 25 years. The cost of its neglect will be large, long term, and impact many facets of the Soviet economy. Estimates vary, of course. "The health costs of pollution in the Soviet Union were reported to be ...\$330 billion...in 1987, or 11% of estimated GNP...(French 10)" In late 1989, the deputy chairman of the Supreme Soviet's ecology committee, Mr. Yablokov estimated that "for the next ten years the government will need to spend more than \$40 billion annually on environmental programs (Garelik 64)."

#### HISTORY OF ABUSE - CAUTIOUS HOPE

Friedrich Engels, the German socialist who collaborated with Karl Marx, said, "We will not flatter ourselves too much with victories over nature. For every victory, it takes its vengeance upon us (Singleton 2)." It is clear that the communist leaders

of the early Soviet Union did not heed this warning. President Gorbachev, in his 1990 speech to the Global Forum, admitted, "After the revolution, having launched the industrialization of the country, we were not inclined to be 'distracted' by what we then thought of as secondary matters, or, even less, to spend our limited means on these [environmental] objectives (Gorbachev 15)."

The ideological and practical reasons why environmental protection was not a priority in the Soviet Union have already been discussed. Fundamental economic expansion was the overriding focus for decades. But it would be wrong to say that no environmental concern has existed.

#### The Soviet Environmental Movement

Vladimir Vernadsky's Biosphere started an ecology body of science in the Soviet Union. Scientists continuously warned Soviet officials of the environmental effects national industrial policy was having. For the most part, those warning fell on deaf ears because they conflicted with production targets. V.A. Chivilikhin's 1963 article about the pollution of Lake Baikal really marked the beginning of a widespread appreciation and concern about the Soviet environment.

#### The Government Responds

Throughout the 1960s and 1970s, a large number of laws and regulations were established attempting to address a wide range of environmental concerns. However, these actions were largely uncoordinated and incomplete. "By 1972, the Soviet government felt that all-union, comprehensive legislation was needed (Koutaissoff 16-18)."

In late 1972, the Supreme Soviet, Central Committee of the Communist Party of the Soviet Union (CPSU), and the Council of Ministers of the Soviet Union directed that all ministries develop a package of measures to protect the environment. In addition, they were directed to include such measures in all future planning.

Included in this effort was the State Planning Committee (GOSPLAN) which, in conjunction with other ministries and representatives from all the Republics, established a committee to study the condition of the biosphere for the next 20 to 30 years. As a result, for the first time ever, the tenth five-year plan (1976-1980) included a special section on what measures would be taken to protect the environment (18-21).

In 1972, the Soviet Academy of Sciences organized the Scientific Council on the Problems of the Biosphere. This body was chartered to study the environmental impact of existing and proposed facilities throughout the Soviet Union.

A comprehensive package of environmental legislation was passed in 1975. It addressed the management and planned use of

arable land. It stipulated procedures for forestry control and reforestation, especially in European USSR. The legislation established nature preserve areas (totaling .5% of the Soviet territory), suburban and national parks, and natural beauty spots. The total protected area accounted for about 8% of Soviet lands. Also addressed were measures for protecting endangered animals and plants.

Finally, the comprehensive legislation package established an environmental education effort. A series of actions included television wildlife programs, press coverage, and formal education in schools and universities. Tours of wildlife preserves were organized by schools and environmental societies. Also, summer camps and juvenile forestry and agricultural programs were established to sensitize young people about ecology. These have become very popular (23-33).

In 1977, the Soviet constitution was revised. This revision included several provisions relating to natural resource conservation. "Article 67 required all citizens to conserve nature, article 42 assures the right of a healthy human environment, and article 18 calls for the rational, scientific use of the plant and animal kingdoms (Pryde 44)."

### The People Respond

As industrialization in the Soviet Union progressed during

the 1920s thru the 1940s, environmental impacts began to materialize. While the Soviet central government refused to recognize the consequences of their actions in deference to production increase, those living in the affected regions certainly realized what was happening.

Vernadsky's Biosphere, 1926, certainly laid the philosophical foundation for the environmental movement. Chivilikhin's 1963 October magazine article about the damage to Lake Baikal provided wide spread fuel to the environmental movement fire.

In 1978, under the pseudonym Boris Komarov, a concerned government official with access to state environmental secrets, published The Destruction of Nature in the Soviet Union. Due to government prohibitions on releasing such information, the book was only published in the underground press and got limited readership. But for the first time, the extensive destruction of the Soviet environment, and the government's mismanagement, was comprehensively documented.

During this period, as pollution grew in intensity and spread from region to region, those who knew and felt the impact were those who lived in it. In the heavily industrialized Krasnoyarsk region, about 3,400 kilometers east of Moscow, the average life expectancy among men is only 49. Valentina Ikonnikova, a Krasnoyarsk resident said, "Our children are constantly ill. One of our boys was called up to the army, and

he had no teeth. They had all fallen out. Some children cannot grow teeth. They appear and crumble. And there are numerous cases of cancer and skin disease (Jensen 55)."

So environmental concern has existed in the Soviet Union, in official, scientific, and common man terms since the turn of the century. During Stalin's reign, official environmental concern was not tolerated. The Stalinists believed that the environment was to be exploited. Leading conservationists were banned to Siberia, or worse (French 30). So the environmental movement was very much underground.

After Stalin, the severity of sanctions against environmentalists eased, but their warnings and recommendations carried little more weight. The academic community actively studied environmental impacts and proposed policies for protection and abatement of the biosphere. In the 1960s at Moscow State University, a nature protection movement fought for the protection of the wilderness. As long as their recommendations were restricted to preservation and did not attack industrial pollution, their actions were tolerated. According to a Russian environmentalist, Natalya Yourina: "In the sixties, only individuals protested. A movement did not exist (French 30)."

The two significant turning points in the Soviet environmental movement were Gorbachev's rise to power, and Chernobyl. As mentioned earlier, Gorbachev had a predisposed

concern for the environment. That made the environmental movement more acceptable. But his greatest contribution to the environmental movement was glasnost, or freedom of information within the Soviet Union.

In contrast to Boris Komorov's 1978 underground book, in 1989, the Soviet government published its first national environmental report. This report detailed the extent to which the Soviet environment had been degraded. This report unleashed the many underground forces that for years had been struggling with local ecological issues but never realized the full extent of the problem.

The 1986 Chernobyl disaster, under the conditions of glasnost, was a significant catalyst in cohering environmental movement forces. "Haltingly at first, and with greater confidence as they stretched the limits of official tolerance, thousands and sometimes tens of thousands turned out for mass demonstrations to protest nuclear power plants, air and water pollution, beach closings, and all manner of environmental degradation (French 31)."

Hundreds of environmental groups have formed since Chernobyl. Several umbrella groups have formed to provide National focus. The Social Ecological Union is probably the most prominent, representing over 150 organizations in 260 cities and towns.

During the last few years, environmentalist have made an

impact. In 1986 the Soviet Academy of Sciences' Scientific Council on Problems of the Biosphere and local environmental groups had two major victories. Several factories in the Ararat valley near the border of Armenia and Turkey were closed due to the extreme air pollution they caused. And also in 1986, a project to divert water from the rivers of northern Siberia to the arid regions to the south was cancelled (Yashin 8).

In the Ukraine, plans to build a pesticide plant was stopped by local protests arguing that the region was still recovering from the Chernobyl contamination and could not sustain more pollution (Jensen 54).

#### Mikhail Gorbachev's Response

When Gorbachev came to power in 1985, he inherited a failed environmental policy. Despite the efforts in 1972 which resulted in tenth five-year plan environmental protection actions, and despite the 1975 comprehensive legislation package, the Soviet ecology had steadily and dramatically grown worse.

The most significant structural barrier to environmental protection was the fact that the ministries and agencies bound to enforce environmental laws were the same organizations responsible for meeting the State Planning Committee's (GOSPLAN) production targets. When faced with the choice of promoting production or enforcing laws which might hinder production, there

was no choice.

The Soviet law provided for penalizing those who willfully violated the environment. These penalties included the power to close down offending factories. But in the case of high priority factories, they often had enough political clout to circumvent the laws.

For example, within the boundaries of Moscow, the Dinamo electric engineering works has been operating for years producing important electrical appliances. This is despite the fact that there is an injunction ordering its closure or complete reconstruction due to dangerous sanitary conditions (Koutaissoff 22).

Often, when anti-pollution violations were proven, the fines imposed on managers are laughable. "When, for example, the head of the Borislav Drilling Operations Administration was found responsible for emptying 2,000 cubic meters of polluted water into the Shchepilsk River, causing the death of thousands of fish, he was fined twenty-five rubles (Singleton 5)."

In 1985, a major organizational restructuring began to try to address these issues. Directly under the Presidium of the Soviet Council of Ministers, the Commission on Environmental Protection and Rational Use of Natural Resources was formed. Its charter was to advise the Soviet leadership on policy matters. This body was roughly equivalent to the U.S. President's Council on Environmental Quality.

The Soviet State Committee for Hydrometeorology and the Protection of the Environment was formed to monitor the status of water pollution and general biosphere viability. And under GOSPLAN, the Department of Nature Conservation and the Department for the Protection of Nature, Natural Reserves, and Hunting were formed as policy advisory arms of the state planning function (Pryde 94).

Left out of the equation was any organization akin to the Environmental Protection Agency which had independent authority over other governmental bodies, such as GOSPLAN, to enforce environmental laws. In January 1988, the Central Committee of the Communist Party and the Council of Ministers established the State Committee for the Conservation of Nature. The new organization was headed by one of the Deputy Chairmen of the Council of Ministers which ensured that "resolutions of this committee are obligatory for all firms and ministries (Yashin 9)."

This long-awaited decision signifies the end of an ecological impasse that arose from a constellation of problems, among them: a high resource- and energy-consuming economy; bureaucratic approaches to the use of natural resources; economic orientation to gross output; absence of social mechanisms for public discussion of projects that involve

the "conversion of nature"; secrecy in making important management decisions; and inaccessibility of information on various levels (Altshuler 10).

Academia was contributing to the debate by conducting a series of roundtable discussions at Moscow State University in 1988 and 1989. These sessions explored, in a multi-disciplinary way, a variety of issues concerning environmental management and the government's proper role in it (Altshuler 11).

The new State Committee on the Conservation of Nature took its job seriously. In 1989, it published a "precedent-setting" report which thoroughly reviewed the state of the environment and environmental policy in the USSR. Part one is a detailed account of current state of the environment and resource use. Part two outlined state environmental policies and described bureaucratic inefficiencies which hamper effective management. The third part lists all of the international environmental activities that the Soviet Union participates in (Demko 25-26).

In conjunction with the organization of the State Committee on the Conservation of Nature, the Supreme Soviet set out to overhaul the country's environmental laws. The revision included a procedure for conducting environmental impact studies prior to all major construction projects to preclude environmental damage. The overhaul also included a "reappraisal of the Soviet nuclear energy program and a review of the chemicals used in industry and

agriculture (Garelik 64)."

In President Gorbachev's 19 January 1990 speech before the Global Forum on Environment and Development for Survival, he announced that the First Congress of the Peoples Deputies had determined to make a major shift in domestic and foreign policy. That included a reconsideration of "our attitude toward nature and the path toward the greening of our politics." The Soviet government was now committed to "a radical change of the nature of our production activity from the viewpoint of its ecological consequences (Gorbachev 15)."

He stated that a grand plan was in progress to establish targets by region for environmental quality improvement and future management. The plan had a target date of the year 2000 for bringing pollution levels within acceptable ranges. He also said that the areas devoted to national parks and nature preserves would be tripled by the year 2000.

What Happens Now?

As Gorbachev's reforms resulted in greater political freedoms, political remedies were demanded for the state of the biosphere. In fact, environmental protection was a major issue during the independence movements which eventually broke the Soviet Union apart. When Boris Yeltsin was elected president of the Russian republic, one of his first actions was to announce a

moratorium on the construction of nuclear power plants.

"Environmental nationalism in the Ukraine helped fuel the nationalism leading to the republic's July 15 declaration of national sovereignty (9)."

The Soviet Union's overriding preoccupation with industrial expansion, at all cost, its failure to enforce the environmental protection laws that did exist, and its belated recognition of the extent to which the people abhorred the environment's degradation certainly contributed to the collapse of the Soviet Union.

With Gorbachev's fall from power and the dismemberment of the Soviet Union, what now happens to the apparent environmental progress that has been made in recent years? It is certainly difficult to predict. "Faced with a collapsing economy, rising crime and open fighting among its members, the new Commonwealth of Independent States has pushed environmental issues far down on its list of priorities (Elmer-Dewitt 67)."

Garelik points out that a major impediment to environmental cleanup progress is the sorry state of the technology base. He suggests that their outmoded machinery is less efficient and more polluting than modern equipment. The Soviets realized that they need environmental technologies from other countries (64).

One ray of hope is the fact that environmental issues were a key element of the politics of independence of many of the former Soviet republics. The institutionalization of those issues into

the political process over the last three years may have created a momentum which will keep the environmental movement alive despite other significant priorities. One thing is certain, the pollution of the region's air, water, land, and seas will not go away without positive intervention.

#### The United States' Response

What can and should the United States do to promote environmental responsibility in the new Independent States? First, as we negotiate bi-lateral agreements for aid and technical exchanges of various kinds, we should ensure that environmental impacts are adequately identified and abated. Part of our technical assistance should be environmental cleanup and abatement equipment and techniques.

Second, we should lead a United Nations effort to coordinate environmental responsibility from the world community. This would require several actions. We should encourage the immediate membership of each of the new Independent States into the United Nations Environmental Program as soon as they become United Nations members. Associate membership should be encouraged prior to U.N. membership. This will establish international environmental standards in the new nations if they have not adopted the former Soviet standards.

The U.N. must also persuade its members to make

environmentally sound aid and support agreements with the Independent States. As an international problem, it is in everyone's interest to clean up eastern Europe and all of the new Independent States.

Third, the United States should offer scientific support to study and design abatement actions. Scientific teams can be used as part of an aid package to prepare environmental impact assessments and recommend abatement techniques and equipment which can be provided by the U.S. The U.S. Army Corps of Engineers are already experienced at both environmental impact assessment and the construction of abatement facilities and could easily be used as a U.S. agent for such a program.

#### It Is A Global Problem

This paper has argued that environmental pollution is a global problem. The degradation of the biosphere recognizes no national boundaries. Its impacts are far reaching and, in its extreme, could be catastrophic.

Environmental degradation is also an economic issue. When left unchecked, it negatively effects local efficiency and effectiveness. In the cases of air and water pollution, international economic effects are also realized, e.g. the Black Sea.

As in any situation where an issue can create local or

international economic friction, the potential for conflict is great. When the health and economic livelihood of people are at stake, political friction is sure to arise. So environmental degradation is ultimately a security issue.

It is certainly in the best interest of the United States to promote a peaceful transition of the Soviet region to a politically stable, preferably democratic, market economy. This can only become a reality if the forces which created political unrest resulting in the USSR's collapse are quickly dealt with. This paper has argued that environmental degradation was one of those forces.

The United States must, therefore, do all it can to assist, encourage, and coerce the new Independent States to carry President Gorbachev's initiatives into the 1990s.

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