

A black rectangular box with a halftone dot pattern. Inside the box, the words "PROFESSIONAL" and "PRACTICE" are written in white, uppercase, sans-serif font, stacked vertically.

ENVIRONMENTAL IMPACT ASSESSMENT IN RUSSIA

Sergei M. Govorushko

Until the mid-1980s the Russian people believed they possessed a reasonably safe environment when compared with developed capitalist countries. Publications described an abundance of environmental problems in other countries—for example, North America's Great Lakes as perishing, how the Rhine had become Europe's sewer, oxygen machines and plastic palm trees on the streets of Japanese towns. All evidence of environmental deterioration in Russia was confidential. Thus, it was assumed there was no need to spend funds on natural resource protection. When Russia's political situation changed, however, considerable evidence of environmental trouble was revealed in various regions of the former USSR, including Russia.

THE PROBLEM

The Russian Federation has an area of 17 million square kilometers and a population of about 150 million. There are 24,000 enterprises releasing harmful substances into the atmosphere and water basins in Russia. Only **76**

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percent of all harmful airborne waste is trapped and rendered safe. The situation is far worse with sewage. As little as 18 percent of wastewater is treated; that is, **82** percent of the wastewater discharged into Russia's water basins is untreated because of either the lack of treatment facilities or their improper operation. The water quality of major rivers in Russia is undesirable. Of the overall volume of discharge into the atmosphere and water **bodies**, metallurgical works are responsible for **33** percent, power installations for 29 percent, the coal mining industry for **8** percent, and the chemical industry for 7 percent.

Loss and degradation of agricultural areas is also occurring. Russia's total area of agricultural lands approaches 209 million hectares. More than a quarter of Russia' agricultural lands have been subjected to erosion; **12.3** percent of agricultural lands have been allowed to become overgrown; and 1,200,000 hectares of agricultural lands have been destroyed by mining, development, road building, etc.

Losses are great in irreplaceable natural resources. When mining mineral resources, **14.2** percent of the coal and 7.6 percent of the iron ore are lost. Oil recovery from pools does not exceed **30** percent.

Russia contains over a billion hectares of woods, where a quarter of world's wood reserves is concentrated. However, planned cutting areas are utilized improperly. The overcutting of conifers is allowed and half of deciduous cuttings are not used. The overall wood waste amounts to **20** percent of the whole cutting. Reforestation lags behind cutting by more than a million hectares a year.

In recent decades negative trends in the of number and viability of wild animals have been observed. The number of rare and endangered species of plants and wild animals is growing. The structure and the composition of fish stock are changing, and the productivity of most of Russia's fishing basins is decreasing. The degradation of the natural environment has adversely affected human health and is responsible for decreases *in* Russian life expectancy.

The main reasons for this situation are:

1. Ownership by the state of both natural resources and means of production affecting the natural environment. Paradoxically, the

state itself exploited natural resources through its enterprises, regulated natural resources through its agencies, and punished itself, financially in particular, for violation of the legislation enacted by it itself.

2. The military and industry used all means intended for environmental protection and improvement of technology for other priorities.
3. Prevalence of a consumer psychology that assumed that Russia's natural resources were infinite and inexhaustible, along with the poor development of an environmentally sensitive viewpoint. Most Russian people love nature in an abstract manner and that love comes to **an** end when a new activity is needed.

In many respects, Russia is a country of extremes. The recent and thoughtless rejection of economic planning, the need **for** which was considered an indisputable truth under socialism, reflects this characteristic. It is widely believed that planning is useless with a market economy. Yet, the rapid growth of Japan in its post-war years in many respects resulted from the reasonable use of the **USSR's** principles for economic planning. The situation is similar in industrial engineering. **For** example, the overwhelming majority of the country's population once welcomed projects of the "All-Union Urgent Komsomol Construction" (large-scale projects of national importance in less-developed areas) enthusiastically.

As the environmental troubles associated with industrial projects became widely known, the situation reversed. In various regions of the country, numerous spontaneous movements rose **up** against building new enterprises and supporting the closing of many existing ones. Most of Russia's people came to dismiss the very idea of construction. Lack of popular support has caused many local authorities to prohibit the construction of various enterprises, particularly power projects (e.g., the Katunskaya, Turukhanskaya, Cheboksarovskaya, and Nyzhnekamskaya hydropower stations; the Rostovskaya, Krymskaya, Tatarskaya, Bashkirskaya, and Smolenskaya atomic power plants; and several thermoelectric plants). In a short time, however, several regions experienced an energy crisis and a reasonable compromise was reached.

EIA IN RUSSIA

Law and Subject Projects

Environmental impact assessment (EIA) in Russia is regulated by section V—State Environmental Impact Assessment, in the Environmental Protection Act (Russian Federation). The range of times in project planning when an EIA is required is wide, including project preplanning, predesign, and design engineering. The products of preplanning include development schemes and design options for district and town development, prediction of the effects on economic development, determination of potential settlement patterns, etc. The products of predesign include a feasibility study, a request for a design proposal, design criteria, project site and routing criteria, etc. Design products include draft construction plans, construction and operating cost estimates, etc. Draft legislation and regulations, unusual engineering, materials and substances, and licenses to use natural resources also are subjects of EIA.

Environmental studies that precede design are:

1. **Declaration of intentions**, including substantiation of (a) the social and economic necessity of the planned activity; (b) the volumes of natural resources to be used; and (c) the **size** of inhabited and transformed territory. The second stage, a feasibility study of project siting, should be completed at the same time as the declaration of intentions in case state environmental bodies and local authorities choose to give their preliminary consent for carrying out the planned activity at this early stage.
2. **Feasibility study of project siting**. With some variation from project to project, the following factors are examined by appropriate experts:
 - a. Opportunities to locate the project so it is compatible with the project area' environmental quality, social conditions, and natural resource potential.
 - b. Sources, types, and subjects of potential impacts.
 - c. Potential changes to environmental conditions and possible consequences associated with such changes.
 - d. Potential measures to avoid adverse impacts.

Local authorities document the site selection process and their site selection decision. State natural resource protection bodies must approve the findings of the project siting feasibility study.

3. **Feasibility study of building design**, including—
 - a. Preparation of a quantitative and qualitative assessment of environmental impacts associated construction, operation, and, at the end of its life, closing the project.
 - b. Determination of expected changes in overall environmental quality and the likely consequences of those changes.
 - c. Identification of measures for preventing adverse environmental impacts.
 - d. Projection of likely accidents, their consequences, and measures for avoiding them.

These additional findings are reviewed by state ecological expertise. Their conclusions, favorable or negative, are used by local authorities to make their decisions on site use prior to preparation of the EIA.

Leadership and Financing

The groups and commissions participating in the EIA process are organized under Russia's Ministry of Nature. The first Deputy Minister of Environmental Protection and Natural Resources is in charge of the EIA process. The leadership of groups and commissions directly engaged in implementing EIA is exercised by outside experts.

Financing for the Russian Federation's EIA process comes from the federal budget **and** at the expense of project proponents. The outside expert's payment is regulated by a contract. Project and program financing is made available only after preparation of the EIA.

Article **38** of the **EIA** law requires officials to abide by requirements stipulated in the state EIA's findings and holds impact assessment experts responsible for the validity of their conclusions. EIAs for public projects are prepared by research groups and public associations under their own direction. Their findings take the form of recommendations and information for decision makers, but their findings become a legal obligation once adopted by state EIA administrators.

Comparison to Past Practices

The list of projects that are subject to the obligatory **EIA** was approved by Order **W222** of 18 July 1994 (Ministry of Environmental and Natural Resources Protection). Compared to a similar list developed and used by the USSR, Council Directive of **27** June 1985 on the assessment of the effects of certain public and private projects on the environment (**85/337/EEC**), it is obvious that Russian list is considerably tougher. The 1985 list includes many projects categorized as desirable that are mandatory in the 1994 list.

ENFORCEMENT OF RUSSIAN ENVIRONMENTAL PROTECTION LAW

At this time, Russian natural resource protection legislation for both **EIA** and in general is considered satisfactory and provides the needed mechanism for improving the environmental situation in Russia. It will, however, take additional time for the laws to be universally practiced.

The lack of interaction between the law and daily living is characteristic of Russia. For example, Article **27** of the law specifies permissible levels of toxin release. On **3** August **1992**, however, Russia's government established bodies to adopt temporary exceptions to Article **27** and develop plans for decreasing pollutant emissions over a longer period of time for activities that could not meet the specifications of Article **27**. In Russia, however, there is nothing more constant than "temporary." Thus, Article **27** calls for one level of emissions, while in reality an alternative level that contradicts those of Article **27** is widely used. Presently only **15** to **20** percent of pollution producers meet Article **27**'s requirements.

The situation is similar for Article **26** of the law, which establishes permissible concentrations of harmful substances. For example, 479 norms for atmospheric concentrations of pollutants were required in 1991. However, many of them were exceeded by 10 times or more in 55 of 334 Russian towns where observations of atmospheric pollution levels were performed in 1991.

At this time, prospects for environmental improvements in Russia appear gloomy. On one hand, as older industrial production facilities wear out and are closed, environmental pollution decreases as releases into the atmospheric air, surface water, etc., are reduced. For example, the volume of releases

into the atmosphere in Russia in 1993 was **88.1** percent of that in 1992. On the other hand, the greater part of the equipment used by industry is now out-of-date, and the pace of its updating has reduced sharply. Thus, many operating production facilities continue to produce severe environmental pollution both in emergencies and in normal operation. As a whole, existing tendencies to pollute are being retained and environmental quality continues to deteriorate at a rapid pace.

To improve environmental quality in Russia, the observance of legal standards is essential. First, users of Russia's natural resources must recognize that environmental quality is in their best interests economically. To attain this end, both positive (financing, crediting, privileges when promoting environmentally sound technologies, etc.) and negative (payment for use of natural resources, environmentally harmful product tax, etc.) incentives need to be used. The most significant economic incentive stipulated in Russian law is a payment for using natural resources. Two types of payments are recognized that depend on the kind of *use-withdrawal* (using a natural substance or dumping) and *emissions* (placement of industrial wastes in the environment). Second, the system of economic incentives is supplemented by administrative and legal actions established in the law. **EIA** is one such action, along with penalties for breaking the environmental control law.