LEGAL NOTICE

The Government of the District of Columbia has certified an amendment of the Articles of Incorporation of the National Council for Soviet and East European Research changing the name of the Corporation to THE NATIONAL COUNCIL FOR EURASIAN AND EAST EUROPEAN RESEARCH, effective on June 9, 1997. Grants, contracts and all other legal engagements of and with the Corporation made under its former name are unaffected and remain in force unless/until modified in writing by the parties thereto.

PROJECT INFORMATION:

CONTRACTOR: George Perkins Marsh Institute, Clark University
PRINCIPAL INVESTIGATOR: David P. Angel and Halina Szejnwald Brown
COUNCIL CONTRACT NUMBER: 912-02
DATE: October 20, 1997

COPYRIGHT INFORMATION

Individual researchers retain the copyright on their work products derived from research funded by contract or grant from the National Council for Eurasian and East European Research. However, the Council and the United States Government have the right to duplicate and disseminate, in written and electronic form, this Report submitted to the Council under this Contract or Grant, as follows: Such dissemination may be made by the Council solely (a) for its own internal use, and (b) to the United States Government (1) for its own internal use; (2) for further dissemination to domestic, international and foreign governments, entities and individuals to serve official United States Government purposes; and (3) for dissemination in accordance with the Freedom of Information Act or other law or policy of the United States Government granting the public rights of access to documents held by the United States Government. Neither the Council, nor the United States Government, nor any recipient of this Report by reason of such dissemination, may use this Report for commercial sale.

1 The work leading to this report was supported in part by contract or grant funds provided by the National Council for Eurasian and East European Research, made available by the U. S. Department of State under Title VIII (the Soviet-Eastern European Research and Training Act of 1983, as amended). The analysis and interpretations contained in the report are those of the author(s).
ENVIRONMENT, HEALTH AND SAFETY OF PRIVATIZED FIRMS IN POLAND

DAVID P. ANGEL and HALINA SZEJNWALD BROWN
George Perkins Marsh Institute, Clark University
Worcester, MA 01610

Abstract

The goal of this research was to assess the performance of the environmental, health and safety system (EH&S) in Poland with respect to privatized manufacturing firms. Specifically, we sought to determine through a cross-sectional questionnaire survey whether the EH&S system was being implemented in practice, and whether it was achieving the objectives of improved EH&S performance. Following the collapse of communism, the Polish government implemented a series of incremental reforms in the EH&S system, including a substantial strengthening of the enforcement regime. Have these reforms been successful?

Our findings are positive. In general, our survey data identify an operational system of EH&S protection that is well suited to the political and economic conditions of Poland and is yielding measurable improvements in EH&S performance by manufacturing firms. A comprehensive system of EH&S permitting is in place which involves technical evaluation of such environmental impacts as air, waste and water emissions, and worker health and safety. The system involves fines and fees for noncompliance that are of sufficient scale to motivate changes in operating procedures by some manufacturing firms. Importantly, the system has legitimacy among industrial firms and demonstrates flexibility in balancing EH&S interests with other concerns.

Overview:

The Research Question: Have the reforms in environmental, health and safety protection implemented in Poland yielded improvements in the EH&S performance of privatized manufacturing firms?

The grim legacy of environmental degradation and worker health and safety problems in Poland under communist rule has been extensively documented in recent years: severe air pollution in major cities, dangerous heavy metal contamination of the soil, degradation of surface and groundwater, and high rates of worker exposure to noise, dust and other hazards. With the collapse of communism and restructuring of the economy in Poland, improvements in EH&S
performance emerged as an important national priority. Significant reforms to the EH&S system were implemented during the early 1990s, including strengthening of the enforcement system, closing loopholes in laws, raising fees and fines for pollution, and codifying licensing procedures for industrial facilities.

The Polish government anticipated that incremental regulatory reform would generate significant improvements in the EH&S performance of manufacturing firms. Observers in the international community and in Poland expressed doubts, suggesting that the pressures of transition to a free market economy would undermine the legitimacy of the EH&S system and the willingness of firms to commit scarce resources to EH&S protection. Regulatory reform was premised on the assumption that when confronted by systemic change in the political and economic domains, and enhanced enforcement of EH&S laws, both firms and regulators would change their behavior. Has this assumption proven valid? Is the emergent system of EH&S protection in Poland generating improvements in EH&S performance? In short, is Poland on a path to reduced industrial pollution and improved worker health and safety?

Research design: Our research addresses these questions. The research design comprised a cross-sectional, size-stratified, questionnaire survey of privatized manufacturing firms. The survey is targeted to the emerging privatized economy in Poland and excludes state-owned manufacturing facilities (many of which were among the heaviest polluters, but the majority of which are destined for closure). We obtained two random samples of 300 manufacturing firms (600 firms in total) from the State Ministry of Privatization. The questionnaire survey was mailed to 300 of these firms, divided into three size categories (less than 100 employees, 101-250 employees, and more than 250 employees). The second set of 300 was held in reserve against the possibility of a low response rate to the survey. As of this date, we have received 89 completed questionnaires, for a response rate of 30%. Standard survey follow up techniques were employed. In our analysis, we have not observed significant differences among the responses of firms by size class. Thus, we present major findings for the total sample only.

In general, our questionnaire survey sought to determine whether the regulatory and enforcement procedures mandated for manufacturing firms were operational and effective. Poland has a detailed and extensive set of licensing and regulatory procedures covering air, water and waste emissions, as well as worker health and safety. Environmental regulation is handled by the Ministry of Environmental Protection, Natural Resources and Forestry. The enforcement arm of

---

1In Poland environmental protection was a key mobilizing theme in political transformation and featured prominently in the historic Round table discussions involving Solidarity and the outgoing Jaruselski government.
this Ministry is the State Environmental Protection Inspectorate (PIOS). Regulation involves the issuance of air permits that specify allowable emission limits relative to ambient standards, permits for waste water and for industrial and hazardous waste. Policy instruments include a system of environmental fees and fines, charges for water use and pollution, and numerous ambient environmental standards.

Worker health and safety issues are addressed jointly by the Ministry of Labor and Social Policy, and by the Ministry of Health and Welfare. The basic system of labor protection dates back to the 1960s. Enforcement of labor protection is in the hands of the State Labor Inspectorate which works through an extensive regional network of inspectors. Similarly, enforcement of occupational health statutes is carried out for the Ministry of Health by the State Sanitary Inspectorate. Enforcement is based upon a set of maximum allowable occupational standards for chemical compounds, dust, noise and other hazardous agents and conditions. Note that in general these standards are more numerous and more stringent than their equivalents in the United States and western Europe.

Findings: We find strong evidence that Poland has an operative and legitimate system of EH&S protection.

In general, the results of the questionnaire survey confirm that the system of EH&S protection described in Poland’s laws, statutes, and administrative procedures is an operational reality. Manufacturing firms undergo a careful licensing process that involves technical evaluation of EH&S impacts and performance. The regulatory personnel are both competent and very familiar with the industrial enterprises under their purview. Fees and fines are applied as mandated by the legislation, but also with some flexibility and sensitivity to the situation of individual firms. Of particular importance, the system has legitimacy in the eyes of industry and other key stakeholders. We highlight below some of the important findings from the survey.

• The system of EH&S assessment and permitting for manufacturing facilities is operational.

Poland has a detailed and comprehensive EH&S permitting system. Our survey data confirm that this system is operational. In the case of air emissions, for example, 47 of our sample firms generate emissions that require an air permit. All of these firms had obtained an air permit, and only 4 of the 47 (8.5%) had operated without an air permit within the past five years. The air permits are technical documents based upon a detailed analysis of the potential impact of a factory upon ambient air quality.

Interestingly, the vast majority (95%) of the air permit applications (so-called operats)
reported in our sample were prepared by Ministry certified experts or specialized firms. These certified experts conduct the technical analysis required to establish admissible emissions limits and assess whether the firms are in violation of these limits. As a group, they provide effective intermediation between regulators and firms. In all cases, the applications (operat) submitted by experts were accepted as presented. Thus, there is now a significant professionalization of the assessment and licensing process.

- **Legal emission and exposure limits are exceeded in a significant number of cases.**
  Of a total of 54 sample firms subject to air emissions permitting, 14 (25.9%) reported that their emissions exceeded those allowed under ambient air quality standards. Similarly 11 (14.3%) of 77 firms reported that their waste water exceeded standards set by sewage works, and 38 (48.1%) of 79 firms reported that they had exceeded one or more occupational health and safety standards (e.g. for noise, dust or exposure to chemicals). The high level of violation observed in this latter case was anticipated, given the very strict standards for occupational health and safety in Poland, inherited in many cases from the period of communist rule.

- **In general the regulatory authorities have adopted a flexible and negotiative approach towards firms that are in violation of emissions or health and safety standards.**
  When asked as to the response of authorities to violations of air quality standards, firms identified the following options (in order of frequency cited): (1) regulatory authorities required specific changes to be made in factory operations, (2) regulators gave a time limit within which changes were to be made, and (3) regulators required that a plan for solving the problem be submitted. Rather than closing a factory, regulators are satisfied if a factory is demonstrating good faith efforts to reduce emissions. In general we observe regulatory authorities showing both familiarity with, and sensitivity to, economic and technological constraints: pushing firms to the limit of available resources.

  In the case of waste water standards, the three most frequent responses of authorities were: (1) regulators imposed fines, (2) regulators allowed factories to operate without changes (3) regulators allowed factories more time to make changes. In many cases, the large fixed costs involved in setting up sewage treatment plants prevented an incremental process of improvement in waste water emissions.

  With respect to health and safety violations, the most frequent responses were: (1) regulators provided a specific time limit within which changes must be made and (2) regulators ordered specific changes to be made. (Note: Regulators have moved to close factories when continued operation would constitute an immediate and severe health risk.)
The majority of facilities have implemented, or are in the process of implementing, changes required by regulators.

When regulators mandate changes in a factory's operations or technology, the majority of firms in our sample report implementation of the changes. In the case of 26 firms required to make changes in their air emissions, 15 (57.6%) report implementation of the changes, and 9 (34.6%) report that they are working to complete the changes. Only two (7.7%) of 26 have not responded to the authorities' requirements.

While the average level of pollution fees and fines is quite low, these charges can represent a significant cost for highly polluting factories.

Total environmental fees (air, waste water, solid waste, etc.) comprised on average (mean) 0.67% (i.e. less than 1%) of the total operating costs of the sample firms. Fees and fines are, however, related to levels of pollution and are therefore concentrated on the higher polluting firms. In these cases, fees and fines can be a significant incentive to environmental improvement.

One striking feature of the EH&S system in Poland today is the limited role of unions and NGOs at the factory level.

Given the key role of trade unions in placing EH&S issues upon the reform agenda, as well as the importance given to community organizations in the United States, we had expected a continuing and growing role for these groups in the monitoring and regulation of factories in Poland. Our survey results indicate, however, only a modest level of activity on the part of trade unions. For example, when asked who beyond a firm's management was active in identifying health and safety problems, the sample firms cited health and safety specialists, labor and health inspectors, and the state labor inspectorate above trade unions. Similarly, state health and safety inspectors (SANEPID and PIP) were cited as important sources of information about requisite improvements in working conditions.

Overall the EH&S system is viewed as an appropriate and legitimate regulatory instrument.

The enforcement of EH&S laws, and the imposition of fees and fines, have increased substantially in Poland since 1989. Nevertheless, the system garners general support from the firms in our sample. When asked as to their overall opinion on environmental regulations, 15 of 87 (17.2%) firms reported that regulations were too strict, 58 of 87 (66.7%) reported that the regulations were about correct, and 14 of 87 (16.1%) reported that they believed regulations to be too lenient.

The sample firms reported a similar reaction to health and safety regulations. 17 of 83 (20.5%) believed that health and safety regulations are too strict, 62 of 83 (74.7%) reported that
the regulations were about correct, and 4 of 83 (4.8%) reported that the regulations were too lenient.

The widespread acceptance among sample firms of the intensified regime of EH&S protection is a significant resource of the system.

**Policy Conclusions:** The findings of our survey provide a basis for optimism concerning the likelihood that Poland in the near term will strike an effective balance between EH&S goals and other social-economic interests such as growth and employment. To a significant degree, the positive performance of the current EH&S system derives from the long history of legislative activity. In the post War period, Poland passed a series of progressive and innovative laws and developed sophisticated institutions, policy instruments and institutional capability. The problems were largely external to the EH&S system, a function of a centrally-planned economy that emphasized heavy polluting industries and provided significant disincentives to pollution prevention. With the collapse of the communist regime, Poland had extensive institutional and legislative resources to draw upon in addressing EH&S concerns.

Thus our central policy conclusion is that in the near term there is cause for cautious optimism concerning EH&S protection in Poland. We highlight three challenges that over time might undermine the current progress. First, if current economic growth should falter and firms come under increasing economic pressure, the resources available for EH&S protection may be reduced. Second, as a new generation of entrepreneurs, politicians and administrators emerges, it is unclear whether they will maintain the same commitment to negotiated, balanced solutions. Third, over time it likely that industries beyond the energy sector will begin to organize and engage in lobbying against EH&S standards and procedures.