

RAISING INDUSTRY'S ROLE IN THE FIELD OF ENVIRONMENTAL COMPLIANCE ASSURANCE: ELEMENTS OF REFORM IN KAZAKHSTAN

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SUMMARY

Assisting transition economies in the region of Eastern Europe, Caucasus, and Central Asia to better align environmental policy development and implementation is the core objective of the Regulatory Environmental Programme Implementation Network (commonly referred to as REPIN). The Network facilitates access to best practices of environmental management and compliance assurance and implements pilot projects in individual countries of the region. Raising industry's responsiveness to the regulatory environmental compliance assurance program in Kazakhstan is one such pilot projects. Its results are presented in the current article.

1 INTRODUCTION

Over the last decade, the regulated community in the Eastern Europe, Caucasus, and Central Asia region, as in other regions, has become subject to new instruments of environmental policy that create incentives to comply with regulatory requirements or go beyond such requirements. In some cases, fervent discussions around new instruments, in particular voluntary approaches, eclipsed the need to assess the effectiveness of, and reform, more traditional instruments, including self-monitoring, self-reporting, and self-correction. To address this need, a pilot project was launched in Kazakhstan under the framework of REPIN.

DEFINITION OF “ENVIRONMENTAL SELF-SUPERVISION”

One of the first challenges within the project in Kazakhstan was to find a synthetic term that would best reflect the system of mandatory actions by the regulatees to ensure their own compliance with regulatory requirements (most often known as “self-monitoring”). The project team proposed to use the term “environmental self-supervision” and defined it as a system of organizational and technical measures, put in place and financed by regulatees, subject to environmental permitting or general binding rules in the field of environmental protection, in order to ensure their own

compliance with environmental requirements. This includes:

- monitoring of (i) operations; (ii) emissions of pollutants regulated by permits or general binding rules; (iii) ambient conditions in the vicinity of the facility concerned – with a scope that would balance environmental effectiveness with costs of monitoring;
- record-keeping of data obtained through monitoring of any unforeseen circumstances, non-compliance episodes, corrective measures, and complaints from the general public;
- providing reports to the competent authorities – in mandated cases, with a specified regularity, and in a duly aggregate form;
- undertaking other measures, such as assigning environmental responsibilities throughout the whole chain of management, providing basic environmental training, performing self-inspection, and implementing self-correction actions.

3 BENEFITS OF ENVIRONMENTAL SELF-SUPERVISION

For the regulated community, reliable data on emissions and the environmental impact of their production can have significant value from an economic viewpoint. For example, such data can help to better identify and reduce environment-related costs (that can be as high as 30 percent of operational costs in some branches), and minimize environmental liabilities. Disclosure of facility-specific data and comparison between enterprises within the same industrial sector, or with international benchmarks, can further indicate where cost-savings are possible. Furthermore, access to other companies' facility-specific data can build trust within industries that the government is targeting to ensure a level playing field.

The other primary benefits include the possibility of ensuring the earliest possible response to any environmental problem occurring because of malfunctions in

production processes and, at the same time, reduce public spending on governmental compliance monitoring. Self-supervision data can provide a basis for verification of compliance with legal requirements and enforcement and for calculation of various charges. The program can also help to optimize national, regional, and local ambient monitoring systems and establish priorities for inspection.

Disclosure of facility-specific data can help citizens to take individual decisions that affect not only their health, but also economic well-being, such as where to buy property. Worldwide, the social relevance of self-supervision is growing due to higher public access to environmental information, in particular in light of establishment of national Pollutant Release and Transfer Registers.

While there are many other benefits of self-supervision, they will be harnessed only if its results are actually used by stakeholders within decision-making processes. Data collection for the sake of data will lead, most likely, to an erosion of the system's value.

4 DESIGN OF ENVIRONMENTAL SELF-SUPERVISION IN KAZAKHSTAN

In Kazakhstan, environmental self-supervision has a long history at the largest industrial facilities – some of the oldest enterprises reported establishing such programs in the mid-1970s. The design of self-supervision has many positive elements that correspond to good international practice, but some of its weaknesses and its poor links with the new economic and social context diminish its potential benefits.

4.1 Strengths

The obligation for industrial operators to conduct self-supervision is indicated in the Law on Environment Protection, which is a very positive characteristic of the Kazakh regulatory framework. Also, legal stipulations exist in the Administrative and

Penal Codes to minimize the possibility of fraud and negligence within self-supervision program implementation. The secondary legislation gives further guidance on approaches and procedures of self-supervision. In conjunction with a stronger focus on the integrity and professionalism of staff who develop secondary legislation, this model of regulating self-supervision could be very effective. It provides sufficient scope to adjust in a timely manner to any new transition challenges and to gradually develop and tighten regulatory requirements without compromising the goals of social and economic development.

The regulated community (in practice, the largest facilities) is in charge of developing individual multi-media self-supervision programs and of presenting them for approval to the competent authorities. The obligation to conduct self-supervision applies regardless of ownership; uniform self-supervision requirements are established for public and private companies. Enterprises (“natural resource users”) bear full responsibility for implementing self-supervision programs and provide the necessary expertise, equipment, and analytical facilities. Sometimes services are obtained on a sub-contract basis. Results of self-supervision are communicated to competent authorities through regular statistical reports or immediately in the case of emergency situations or accidents. The costs of self-supervision are met by the enterprise.

The government of Kazakhstan regulates the functioning of these systems through certification of laboratories, annual approval of programs, inspection, etc. Competent authorities are allowed to use self-supervision data in law enforcement against violators; this approach is widely used, in particular due to scarce resources available to competent authorities to conduct compliance monitoring.

Finally, non-governmental organizations and the general public voice demands to have access to facility-specific environmental information. This is backed up by Kazakhstan's ratification of the Aarhus Convention and signature of the

Kiev Protocol on Pollutant Release and Transfer Registers.

4.2 Weaknesses

While the self-supervision system has the potential to be very effective, it is undermined by a number of problems, such as:

- gaps and conflicts in laws and regulations, including a poor definition of basic concepts;
- lack of clarity in the mandated scope of self-supervision;
- insufficient attention to quality assurance and quality control;
- assessment of self-supervision performance, based on the existence of a specific organizational form, *i.e.*, of an environmental unit within an industry, rather than on the quality of self-supervision programs and outcomes of their implementation;
- continuing low mutual trust between public authorities and industry;
- poor laboratory facilities of both regulated industries and competent authorities;
- lack of mechanisms to disclose facility-specific data and take into consideration the interest of the general public while designing self-supervision programs;
- limited coordination between different departments and sub-divisions of the Ministry of Environment Protection on matters of self-supervision due to their focus on carrying out very specific functions mandated in legal acts.

The incoherence of the legal basis in allowing the existence of two similar terms with blurred definition – self-supervision and self-monitoring – creates much confusion among the regulated community. Frequently, self-monitoring is understood as the instrumental measurement of emissions or ambient quality, while self-supervision means the decision-making process following self-monitoring. In addition to this interpretation, it is also common to understand self-supervision as emission monitor-

ing and self-monitoring as ambient monitoring (*i.e.*, the monitoring of soil, air, or water quality).

Competent authorities often consider that industries have to monitor the maximum possible number of parameters without balancing the scope of self-supervision with inherent costs. At the same time, competent authorities do not have adequate resources to keep track of and analyze the information received from industry. This leads to a situation in which industries create a superficial mechanism of self-supervision disconnected from the overall management system and therefore of little value beyond mandatory reporting. Contrary to international practices, in order to verify compliance, the values of parameters monitored by operators are compared with historic (inventory) emission levels, rather than the permit conditions.

The quality of self-supervision data raises doubts for a number of reasons. There is no statutory procedure to ensure the integrity of sampling, sample preservation, transportation, and analysis. The robustness and reliability of calculation methods are often challenged due to a high level of uncertainty and absence of quality control and quality assurance. There is evidence of major discrepancies between the measurements made by the state analytical laboratories and enterprise laboratories. Quality problems with laboratory tests often lead to controversy, which sometimes has to be resolved in court. Consequently, both the industries and the competent authorities incur additional administrative costs.

5 PROPOSED ELEMENTS OF POLICY REFORM

There is a need for reforming the current system of self-supervision in Kazakhstan. Most importantly, its obsolete legal, institutional, and technical characteristics have to be addressed and the quality and use of data for decision-making should be enhanced. The need to reform the existing system is recognized by various stakeholders, including governmental authorities,

industry, and the general public. It is recommended that the reform aim at the following key outcomes:

- unambiguous definition of basic concepts and improved legal basis;
- differentiated scope of self-supervision for large industries and Small and Medium-Sized Industries, and its link to permit conditions or general binding rules;
- clear requirements on the content of self-supervision programs;
- longer validity of self-supervision programs, with a possibility to amend them when necessary, and the introduction of post-closure requirements;
- combined use of various types of monitoring (direct and indirect monitoring; operational, emission, and impact monitoring) within self-supervision programs, abandoning the practice of all-encompassing impact monitoring, and acceptance of various organizational forms of self-supervision to better suit the resources available to particular categories of enterprises;
- reliable approaches to setting regimes of monitoring and optimization of self-supervision costs;
- uniform requirements for quality assurance and a strategy to ensure data quality;
- efficient data management, reporting, and a meaningful use of information in decision-making, including self-correction actions;
- regular review and use by authorities, and public scrutiny of self-supervision data;
- better use of self-supervision data for inspection and enforcement, in parallel with the development of the incentive framework for regulated industries to comply with self-supervision requirements.

6 MANAGEMENT OF THE TRANSITION

A transition period (seven to eight

years) should be envisaged for improving self-supervision, with the adoption of an intermediate model, which would facilitate the step-by-step achievement of feasible objectives and bring the system closer to international practices. This will need to be fully coordinated with the process of implementation of requirements under the Kiev Protocol on Pollutant Release and Transfer Registers (PRTR). During the transition period, internal financing of proposed measures (Ministry of Environmental Protection's (MEP) budget and budgetary programs) could be matched with external technical assistance.

6.1 Improving the Legal Basis

In the short term (one year), the MEP will need to propose amendments to the existing legal basis in order to strengthen the foundations of self-supervision. In this context, the definition of self-supervision, its elements and forms will need to be clarified, the differentiated approach towards large industry and Small and Medium-Sized Enterprises enacted, and the powers of the competent authorities stipulated more precisely. The Administrative and Penal Codes will also need to be amended. Good laboratory practice and other process-relevant requirements need to be mandated in secondary legislation. The quality of legal amendments will need to be monitored intensively, based on feedback from practice during a period of two to three years, with a view to further improving the legal basis, if necessary.

The development and approval of a thematic chapter for the Environmental Code (foreseen for 2007) should be finalised through a wide stakeholder consultation process. In this context, the MEP staff need to understand that directly mandating self-supervision and determining its elements in great detail may restrict future developments in the field concerned. It also can be a serious impediment for correcting the design of self-supervision, if the primary legislation is not exact or misleading. However, legal requirements of direct application may be more easily enforceable and

have a stronger impact on compliance behaviour than requirements imposed through secondary legislation.

An important task is to link the reform of self-supervision with the reform of permitting and introduction of differentiated requirements for large industry and other members of the regulated community (see also the Guidance on Integrated Environmental Permitting for Eastern Europe, Caucasus, and Central Asia). A good step forward is the development of the List of Environmentally Hazardous Installations in Kazakhstan, although the categories of installations identified in the List need further definition, in particular as concerns production thresholds. To further develop this List, it is suggested that the MEP uses the list of categories in Annex I of the European Union's Directive on Integrated Pollution Prevention and Control and the Scope of the PRTR Protocol as a starting point.

6.2 Addressing Institutional Issues

As a matter of immediate priority, the MEP should strengthen communication and cooperation between its departments and other sub-divisions that contribute to the reform and functioning of self-supervision. This includes, first of all, the State Committee for Environmental Control, the Department for State Environmental Review and Licensing, the Department of Environmental Policy, and the Department of Legal and International Affairs. Focus should be put on developing procedures of data sharing and joint decision-making, including:

- coordination of any plans to develop secondary legislation and guidance for industry to conduct self-supervision;
- mandatory review of permit requirements (or stand-alone self-supervision programmes) by other Departments and the State Committee for Environmental Control;
- immediate feedback from inspection to permit-writers;
- establishment of a database on compliance history of facilities (including permit

applications, permit documents, reports from site visits, reports from the facility, etc.) that would be accessible for all government stakeholders and easy to use;

- regular and ad-hoc coordination meetings.

In order to facilitate the work of regulators and inspectors, the MEP should develop general and sector-specific technical guidance that would describe the mandatory and desirable elements of self-supervision within a branch. This could be based on the consultative guidance document, developed by the EAP Task Force Secretariat within the demonstration project in Kazakhstan. Such guidance should be widely available and disseminated through all means, including through the MEP's website.

Training will be necessary for various stakeholders to better understand the design of modern self-supervision systems. A training course could be included in the programme delivered by the National Training Centre under MEP, based on materials developed within the demonstration project.

Establishing a powerful information system to share data reported by operators and make them available to the general public can greatly contribute towards increasing the value added of self-supervision. This should be done within the framework of implementation by Kazakhstan of the Kiev protocol on PRTRs. Also the MEP may want to adopt electronic reporting within the framework of the e-government introduction.

6.3 Improving Laboratory Infrastructure and Practice

The government will need to promote and support the creation of reference laboratories and analytical centers, and their participation in the international inter-calibration, training, and certification of personnel. This could include the improvement of both the existing laboratories and the technical skills available with competent authorities, and at the same time, the

development of independent private laboratories, this often being a more cost-effective approach. In the latter case, a legal right to sub-contract sampling and laboratory analysis should be given to competent authorities, and budgets planned for outsourcing such services.

It will be important to review and develop the monitoring capacity of pollutants that are specified in international agreements. For instance, the capacity to monitor dust particles of 10 microns (PM10) in air emissions should be developed immediately.

International experience should be used to improve laboratory practices and techniques. In this context, a very helpful tool is the OECD's Resource Centre for PRTR Release Estimation Techniques. The Resource Centre is an Internet site that has been developed by the Task Force on PRTRs of the OECD's Environment, Health, and Safety Programme. The purpose of the site is to provide a clearing-house of guidance manuals/documents of release estimation techniques for the principal pollutant release and transfer registries developed by OECD Member countries. The manuals and documents include descriptive information on the sources of pollution and the pollutants that are released, as well as information on emission factors, mass balance methods, engineering calculations, and monitoring information. The Resource Centre will be updated on a regular basis to include additional and new documents available. See <http://206.191.48.253/>

6.4 Implementing Facility-Specific Pilot Projects

Pilot projects aiming to establish a comprehensive self-supervision programs in selected enterprises can be a useful tool to assess, among other things, the benefits and costs of implementation of self-supervision, in particular as part of the transition to integrated permitting. Such pilot projects can be recommended particularly for large new investments where enterprises have sufficient capacity. Criteria for selecting

installations for such pilot projects include, most importantly: the environmental impact, compliance costs, and financial performance.

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