

6. Promoting environmental insurance at the regional level in the Russian Federation: selected case studies

A number of Russian policy analysts agree that a rule of thumb of the modern Russian policy-making is as follows: one can succeed with implementing any innovative policy tool if started at the regional level. At the federal level one most likely finds insufficient support and/or interest in new developments. This statement proved to be applicable for developing environmental insurance in the Russian Federation.

In the current section, approaches to promoting EI in the four selected regions of the Russian Federation were reviewed to single out key ingredients of success for establishing a regional EI system.

6.1. History of implementing environmental insurance at the regional level in the Russian Federation

In research literature, the formation of the national EI system is frequently associated with the Ministry of Natural Resources initiatives of the 1990-s: development and adoption of Standard Regulations on the Order of Voluntary Environmental Insurance in the Russian Federation (MNR and Rosgosstrah, 1992), and Experiment on the Development of Environmental Insurance (1994-1996) (MNR, 1994). Moreover, the importance of top-down approach to the EI system(s) in Russia elaboration is stressed by many experts (e.g., in relation to deficiencies of the EI legislation and regulatory framework).

At the same time, the author asserts that the history of EI promotion in Russia gives enough evidence of the crucial role of the ‘regional’ factor.

Bazhaykin (2005) distinguishes two main directions for EI promotion at the regional level in Russia:

- 1) EI promotion, coordinated by regional EI stakeholders: legislative bodies, environmental protection and management departments of regional governments, regional branches of environmental authorities, and insurance supervision service (Direction 1 activities),
- 2) EI promotion, coordinated by the Russian Ministry of Natural Resources (Direction 2 activities).

The Ministry did not start developing environmental insurance from the scratch. As early as in 1992, the first pilot project on assessment of environmental risks and calculating insurance rates for hazardous facilities was carried out in the city of Elektrostal (the Moscow Region) by a research team led by Dr. Gennady A. Motkin, who has become a scholar of authority in the field. These activities gained support of the regional government and received funding from the regional budget. This initiative was soon noticed by the Ministry and gave rise to the idea of conducting a series of regional pilot projects to introduce insurance into state environmental policy. Therefore, the Moscow Region can be viewed as a ‘cradle’ for the development of environmental insurance in Russia.

As a result, the experiment on EI promotion was prepared and undertaken in 1994-1996. A wide range of activities related to Determinants 2-5 of an EI system (see Box 4.1) were to be undertaken, including the analysis of experience with voluntary environmental insurance, elaboration and pilot testing of methods and techniques for risk assessment and allocation, developing regional EI legal and regulatory framework, and raising awareness and building institutional capacity of regional EI stakeholders.

The list of pilot administrative entities (regions and municipalities) was substantial (MNR, 1994). One should note that it included the Nizhniy Novgorod Region, the Leningrad Region, Elektrostal City (the Moscow Region), and Vologda Region. Experts, involved in activities within the Experiment, note that in several regions the targeted process of EI promotion ended soon after the beginning and did not have any impact on regional policy¹⁷. One of the experts asserts that the Experiment provisions were fully implemented only in Elektrostal City (the Moscow Region). At the same time, there has been regions where the Experiment stimulated regional EI stakeholders to take part in EI promotion after its completion, with the respective follow-up activities following Direction 1 of EI promotion.

The list of regions, where environmental insurance is more or less actively developed, is not limited to the Experiment 1994-1996 regions. For examples, the Tatarstan Republic, the Bashkortostan Republic, the Chuvash Republic, the Udmurt Republic, the Mariy-El Republic are among the regions, where environmental policies are marked with the new generation of regional initiatives on EI promotion (Kichigin, 2002; ADFC FARF, 2004; Bazhaykin, 2005).

One should note that in a number of regions EI promotion activities were catalyzed by short-term non-profit projects funded by the Institute for Sustainable Communities (a US-based non-governmental organization) within the ROLL (Replications of Lessons Learnt) program.

¹⁷ Vologda Region, selected as a pilot region for the current project was one of these ‘unsuccessful’ region.

Due to the nature of the source of funding and external implementing organizations, EI promotion projects in these regions cannot be classified as purely regional initiatives. At the same time, project implementers were co-operating with regional EI stakeholders at the moment of applying for funding and gained support of regional governments during project implementation.

From chronological viewpoint, all EI promotion initiatives can be divided into three generations:

- 1) Projects started before and within the MNR Experiment (initiated before 1996),
- 2) Projects started within and soon after the MNR Experiment based on its outcomes (initiated between 1996 and 2000),
- 3) Projects initiated since 2000 (in the period of reforming the state environmental management system).

The author identified two successive lines of replication of lessons learnt, that tier three generations of regional EI promotion projects. The key regional initiatives on EI promotion in Russia are depicted in Figure 6.1. The first line started with the Moscow Region project and led to the Bashkortostan project. The second line originated from the Nizhniy Novgorod Region project. Although these two project ‘families’ were singled out, they did not evolve in isolation to allow for two distinct approaches to EI promotion to formulate. Developers and implementers of ‘independent’ regional initiatives, which cannot be clearly attributed to one of these groups, used the whole range of outcomes from previous projects.

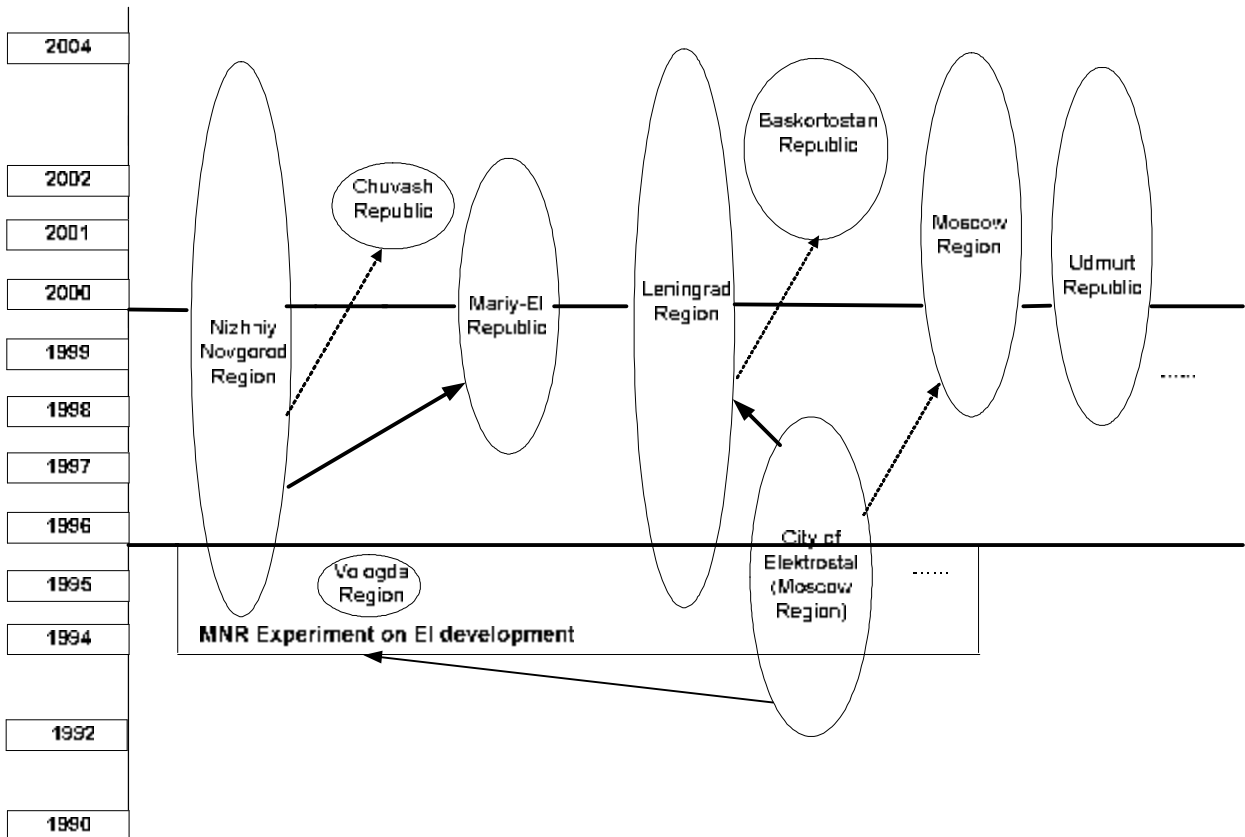


Figure 6.1. History of EI implementation at the regional level in Russia

Based on consultations with national EI experts, four cases were selected for the review of experience with EI development at the regional level in the Russian Federation:

- Moscow Region case (C1),
- Nizhniy Novgorod Region case (C2),
- Leningrad Region case (C3),
- Bashkortostan Republic case (C4).

These cases represent all three periods in the history of EI promotion and differ in sources of funding. Non-profit projects were undertaken in two of the target regions in 1998-1999 (in the Leningrad Region) and 2001-2002 (in the Bashkortostan Republic) and had significant influence on further EI development there. Three of them compile a succession line: experience with EI development of the Moscow Region was used in the Leningrad Region while in the Bashkortostan Republic project developers and implementers were guided by the lessons learnt during both previous initiatives. The Nizhniy Novgorod Region, in turn, is referred to as a pioneer of pilot testing of mandatory environmental liability insurance in Russia, initiated and

funded by the regional government. This collection of cases helped identify factors, crucial for EI promotion at the regional level in the Russian Federation.

The following sections of the paper summarize findings of the case study analysis against the *case review criteria* (see Section 4.4 for details).

6.2. Preconditions for EI development in the case regions

In order to understand factors that contributed to success with EI promotion in the case regions, geographical, economical, and political context of the regions should be analyzed.

The case regions are urbanized areas with high density of production facilities. Industrial sectors, which pose significant threats to the environment (e.g. oil and gas industry, fuel energy industry (C4), chemical and petrochemical industries (C1, C3, C4), heavy manufacturing (C1, C2, C3, C4), non-ferrous metallurgy (C3, C4), and transport (including pipelines) (C1, C2, C3, C4)), are crucial for regional economies (Kosarikov, 1998; Motkin, 1999; Motkin and Tulupov, 2002; WG, 2005a, b, c, d). At the same time, these areas are densely populated, two of them (C1 and C2) are included in the list of twenty most populous regions in the country (ranked as the 3rd and the 20th by total population density, respectively) (WG, 2005e)). The overall anthropogenic loads on the territories are referred as quite high for all four regions (Kochurov, 1999).

Another common feature of the case regions is relatively high economic performance. During the whole transition period, they have been classified as ‘donor regions’ with average per capita income higher than the country mean (MCEWI, 2001). They have been attractive to investors even in the recession period of the early- and mid-1990s (EI, 1996). Currently, they are among 20 major contributors to national industrial production volume, and have high investment ratings. Three of them (C1, C2, C3) are known as regions with prominent scientific capacity and high concentration of research institutions. In turn, the Bashkortostan Republic, as a national republic, has its own Academy of Science supervising specific research institutions.

All case regions are perceived as strong actors in Russian regional politics. One of them (C4) is a republic (these administrative entities have special status and more powers comparing to regions (Oblasts)), others are influential due to high economic and demographic capacity. In the 1990-s, three of them were among forty-two Subjects of Federation maintaining ‘special’ relationships with the federal executive authorities through Pacts on Delimitations of Powers (C2, C3, C4) (President of the Russian Federation and President of the Bashkortostan Republic, 1994; President of the Russian Federation and Governor of the Leningrad Region, 1996;

President of the Russian Federation and Governor of the Nizhny Novgorod Region, 1996). Despite the recent trend for strengthening power hierarchy in Russia and legally binding requirements to cancel previous agreements by June 2002 (FARF, 1999), the Bashkortostan Republic has kept its special status so far (Khramchikhin, 2004). At the same time, bilateral agreements between the Federal Center and the Leningrad Region, and between the Federal Center and the Nizhny Novgorod Region were determined (President of the Russian Federation and Governor of the Leningrad Region, 2002; President of the Russian Federation and Governor of the Nizhny Novgorod Region, 2002).

Thus, all case regions have performed relatively well from economic viewpoint and have been politically influential. At the same time, they are classified as areas of high environmental concern, and their populations are under numerous threats linked to high technogenic pressure on the environment. Therefore, the issue of environmental security is currently on regional agenda. One should note that it is regional public authorities, who are responsible for rehabilitation of territories, suffered from all kinds of emergencies except those of local and transboundary character (Government of the Russian Federation, 1996; FARF, 2004). All reclamation, compensation and other mitigation costs are to be covered from regional budgets. For that reason, regional decision-makers are receptive to any ‘cost-effective’ approaches to managing environment-related risks and ensuring environmental security in their respective regions.

6.3. EI promotion initiatives in the case regions: key facts and figures

While reviewing experience with EI promotion at the regional level in Russia, the author considered all range of activities aimed at incorporating EI into regional environmental protection and environmental management policies in a particular case region as a specific ‘project’ with its focus, objectives, timeline, outputs, and outcomes. Basic facts and figures about EI case studies are summarized in Table 6.1.

Developing environmental insurance in selected regions did not start simultaneously. As mentioned earlier, environmental insurance was firstly offered for regional authorities as a tool to ensure environmental security in the Moscow Region. EI promotion was driven by a research by a group of scientists of Market Economy Institute, RAS, engaged in assessment of losses resulted from accidental environmental pollution (T-1, *pers. comm.*). The first pilot project on assessment and allocation of liability risks for environmental pollution was implemented in 1992-1994 in the City of Elektrostal, a city with high concentration of chemical enterprises. These activities were continued during the MNR Experiment in 1994-1996. EI proponents,

headed by Dr. Gennady A. Motkin, managed to gain support of officials from the Moscow Region Administration. As a result, an experiment for EI promotion in the Moscow Region started in 1995 that covered two districts, about 30 enterprises – sources of environmental threats, and more than 20 insurance companies. Since then, regional government has acquired ownership of the EI promotion efforts in the region.

Moscow Region experience was later replicated in the Leningrad Region and in the Bashkortostan Republic in the framework of one-year capacity building projects within the ROLL Program (carried out in 1998-1999 and 2001-2002, respectively). The projects were implemented by the Market Economy Institute, RAS. Thus, one can assert that EI was ‘imported’ into these regions. However, the group of proponents practiced proactive awareness raising and co-operation to pave the way for further steps towards EI implementation. One can say that the Moscow group ‘prompted’ the idea and served as a resource for people engaged in EI promotion in the Leningrad Region and the Bashkortostan Republic, such as representatives of regional environmental authorities, researchers, and insurers.

While three of the four case regions form a ‘succession’ line, environmental insurance was a ‘home-bred’ idea in the Nizhniy Novgorod Region. The region was among pilot regions of the MNR EI experiment of 1994-1996, though major developments started only in 1996. The region have merited from having ‘a right person in the right place’: an EI proponent, Dr. Alexander N. Kosarikov, was a Deputy Governor responsible for environmental protection and natural resource management in 1994-1998. Having high leverage owing to his position, he used all possible administrative resources to create an EI ‘incubator’ and stimulate EI practice having set regional mandatory environmental insurance regime (L-1, T-1, *pers. comm.*). In this case there was an evident governmental ownership of the EI promotion activities in the region.

EI promotion in the case regions commenced at different periods of time. The longer the history of EI promotion in the region, the more distinct phases can be identified (see Figure 6.1). However, there are ongoing ‘projects’ on EI development in the case regions. Moreover, environmental insurance has been institutionalized by incorporating EI provisions into short-term and medium-term special regional programs (e.g. annual Moscow Region Environment Programs, a five-year Environmental Security Program of the Bashkortostan Republic for 2001-2005, a three-year Insurance Program for Protection of Population, Territories and Natural Environment of the Nizhniy Novgorod Region from Technogenic and Natural Emergencies (2004-2006)). Thus, actions aimed at developing regional EI systems have been integrated into regional strategic initiatives. This indicates that importance of EI is acknowledged.

Table 6.1 Summary of the development of environmental insurance in selected case regions

General information	Moscow Region case (C1)	Nizhny Novgorod Region case (C2)	Leningrad Region case (C3)	Bashkortostan Republic case (C4)
1. Time period	1992 – current	1994 – current	1994 – current	2001 – current
2. Initiator(s)	Market Economy Institute, RAS	Nizhny Novgorod Regional Government	Market Economy Institute, RAS, Eko-Sfinks Environmental Insurance Company	Market Economy Institute, RAS, Life Safety Research Institute of the Bashkortostan Republic
3. Implementers	Market Economy Institute, RAS (1992-1997), Federal Ministry of Environmental Protection (1994-1996), Ministry of Environment and Natural Resource Management of the Moscow Region (1998 – current)	Federal Ministry of Environmental Protection (1994-1996), Government of the Nizhny Novgorod Region (1996 – current)	Federal Ministry of Environmental Protection (1994-1996), Market Economy Institute, RAS (1998-1999), Eco-Sfinks Insurance Company (1993-current) Leningrad Region Government, Department of Natural Resource Management and Environmental Security (1996 – current)	Market Economy Institute, RAS (2001-2002), Interros-Soglasie insurance company (2001-2002) Tuymazy Department of Environment Protection (2002 – current), Environmental Security Research Institute of the Bashkortostan Republic (2002 – current)
4. Funders	Moscow Region Environmental Fund (1992-1997), Moscow Region State Budget (1997-current), Ministry of Natural Resources (1994-1996) Ministry of Science and Industry (1994-2004)	Ministry of Natural Resources (1994-1996), Nizhny Novgorod Region Environmental Fund (1996-1999), Nizhny Novgorod Region State Budget (1999-current)	Ministry of Natural Resources (1994-1996), ROLL Program of the Institute of Sustainable Communities (1998-1999), Leningrad Region Environmental Fund (1996-2001), Leningrad Region State Budget (1999-current)	ROLL Program of the Institute of Sustainable Communities (2001-2002), Bashkortostan Republic State Budget (2002-current),
5. Links to other EI development initiatives	Ministry of Natural Resources Experiment on EI development (1994-1996)	Ministry of Natural Resources Experiment on EI development (1994-1996)	Ministry of Natural Resources Experiment on EI development (1994-1996), Moscow Region EI promotion project (1992-1997)	Moscow Region EI promotion project (1992-1997), Leningrad Region EI Promotion project (1998-1999)
6. Links to the key relevant strategic initiatives at the regional level	“Moscow Region Environment” Annual and two-year Regional Special Programs	“Territories and Natural Environment of the Nizhny Novgorod Region from Technogenic and Natural Emergencies” Programs	Annual “Environmental Protection in the Leningrad Region” Programs, “Water Protection and Management in the Leningrad Region” Programs	“Environmental Security of the Bashkortostan Republic” Integrated Program for 2001-2005

In general, the overarching goal of these activities is to develop and implement a regional mechanism to apply insurance for managing environmental risks - those for the natural environment, population, and territories. The particular focus of government-supported activities has been on civil liability insurance of environmentally hazardous facilities for accidental damage to environment and resulted third-party losses. Property insurance for these facilities, as well as life insurance for personnel, has been developed by insurance companies mainly in an *ad hoc* manner. As everywhere in Russia, this was applied as voluntary insurance. Only in the Moscow Region these activities were undertaken under the aegis of the regional government within the framework of the Moscow Region experiment on EI promotion (T-1, *pers. comm.*). Later, by the MNR promoting EI as property insurance has targeted a particular sector (namely, forestry): in 2002-2003 the MNR Federal Forestry Service initiated the experiment on forest fire insurance in the North-Western Federal Okrug (see Section 5.3 for details).

Although perspectives on the approached to EI implementation have varied from region to region and even from one phase of EI promotion in a particular region to another, EI experts single out the following modules of activities:

- 1) Development and adoption of the regional legal and regulatory framework for environmental liability and environmental insurance,
- 2) Elaboration of guidelines on risk assessment for environmentally hazardous facilities, calculation of losses resulted from emergencies, insurance rates calculations, spending preventive measures reserves (PMR) for environmental risk reduction activities,
- 3) Pilot testing of developed methods and techniques: ‘pilot’ surveys of environmentally hazardous facilities (‘pre-insurance environmental audits’), site-specific environmental risk assessments (probability of environmental accidents and magnitude of expected losses), calculations of insurance rates and premiums on the case-by-case basis (with findings of these surveys to be used for preparing EI contracts for potential insureds); pilot financing of risk reduction activities, and
- 4) Raising the awareness on environmental insurance among regional stakeholders, mainly among operators and owners of environmentally hazardous facilities, regional authorities responsible for ensuring security of population and territories, and the general public (potential recipients of adverse impacts and beneficiaries).

EI promotion project implementers considered elaboration of regional EI legal and regulatory acts as an issue of primary importance, especially at the early stages of EI development in the regions. This may be explained by: (i) deficient national legislation in the early-mid 1990s that prompted regional decision-makers to set up region-specific ground rules for handling the problem, and (ii) perceived importance of strict regulation in the environmental protection and environmental management field. Methodological improvements and pilot testing of novel approaches to environmental risk assessment and allocation were of second priority: scientifically defensive methods and techniques attracted both insurers and, to some extent, potential insureds. At the same time, awareness raising activities were mostly limited to information dissemination through media and reporting by project implementers at regular national conferences on environmental insurance theory and practice (see Section 5.3 for details) (T-1, *pers. comm.*, R-1, *pers. comm.*). Only the Bashkortostan project was marked with an itinerary session of the Legislative House of the Bashkortostan Republic State Assembly in the Tuymazy municipality, which gathered together deputies, heads of municipal environmental authorities, environmental risk assessment and management experts, local self-governance, and environmental NGOs.

In three case regions EI promotion activities included pilot projects at the municipal level: ‘local’ EI experiments in the City of Elektrostal (the Moscow Region), City of Dzerzhinsk (the Nizhniy Novgorod Region), and the Tuymazy municipality (includes the City of Tuymazy and the Tuymazy District) (the Bashkortostan Republic) (C1, C2, C4). These pilots aimed as real-life simulation of the environmental insurance process from survey of environmentally hazardous facilities in pilot municipalities to calculating insurance rates and premiums. In the Bashkortostan Republic this chain was extended to contacting civil liability insurance for accidental environmental damage, and pilot application of the developed scheme for compensation payments to residents affected by accidental emissions.

Collaboration of regional environmental authorities and insurers has been the backbone of EI promotion activities. Industrial enterprises have been rather skeptical towards the EI concept and participated in these activities under pressure of state competent authorities. At the same time, it were pilots that have got these three EI stakeholders together, promoted open dialogue, and invoked interest of the industry towards potential EI benefits. In practice, the first stage of the EI process, risk assessment, was acknowledged by all enterprises (T-1, *pers. comm.*). They found Expert Statements on Environmental Hazardous Potential of their facilities, which summarize hazard assessment findings, including predicted total third-party losses resulted from environmental pollution, useful for internal audit purposes.

Pilot environmental audits of industrial facilities in the case regions envisaged compiling region-specific lists of enterprises whose operations pose significant threats to the environment and human health. Hazardous industrial facilities (as defined by the Federal Law On Industrial Safety of 1997 (FARF, 1997d)) and waterworks (as defined by the Federal Law On Waterworks Safety (FARF, 1997e)) were automatically included into these lists. Additional industrial facilities of concern varied from region to region: e.g. in the Moscow Region a great deal of efforts were invested in applying EI to municipal waste landfills, while in the Leningrad Region and the Nizhniy Novgorod Region gas stations has been subject to close scrutiny.

Before 2001, the primary sources of funding for EI promotion activities were regional Environmental Funds¹⁸ (C1, C2, C3). The federal Ministry of Environmental Protection (later renamed into the Ministry of Natural Resources) and the Ministry of Science and Industry supported EI development in the Moscow Region mainly through thematic research and development tenders. These contests have covered both developing EI conceptual framework and procedures to assess industrial risks and resulted environmental losses. In two regions (the Leningrad Region and the Bashkortostan Republic) EI development was catalyzed by targeted one-year projects on expanding the lessons learnt in other regions. These projects were funded by the Institute of Sustainable Communities (USA) in co-operation with the USAID. One should note that both projects had strong co-financing being supported by insurance companies interested in environmental insurance. In the Nizhniy Novgorod Region a special foundation was established to support both research and implementation of environmental insurance – the Nizhniy Novgorod Region Fund for Environmental Insurance based on a share of insurance payments collected (see Section 6.3 for details). This part of the project was concerned with assessment of environmental risks associated with operations of enterprises and the resulting losses occurred for off-site recipients. As soon as EI provisions were incorporated into regional programs (see Table 6.1), EI activities began to be financed from regional budgets.

¹⁸ The system of state environmental funds, which included the Federal Environmental Fund and its regional and municipal branches, was established in 1992 (Government of the Russian Federation, 1992a). State environmental funds were independent public extra-budget institutions financed from pollution and nature resource exploitation payments. These reserves were to be spent for solving urgent environmental problems: nature restoration, reclamation, compensations for environmental damage, and impact mitigation activities, including applied research in the field of environmental protection. In 2001, the Federal Environmental Fund was abolished (Government of the Russian Federation, 2001), its territorial branches underwent the liquidation procedure and were converted into budget-funded institutions. Therefore, environmental payments became consolidated budget payments.

6.4. Approaches to EI implementation in the case regions

As mentioned earlier, targeted activities for EI promotion at the regional level in Russia have been focused mainly on civil liability insurance for environmental damage and resulted third-party damage, which is a type of environmental insurance, according to the broad understanding of this term (see Chapter 5.4 for details).

Within ELI context, one can identify the following EI stakeholders mainly concerned with the way EI (if any) is implemented:

- (potential) insured (operator of an environmentally hazardous facility which poses significant threats to the environment and human health),
- insurers (undertaking potential insureds' risk of being liable for third-party and environmental damage)
- third parties (physical persons and legal entities), potentially affected by operation of the environmentally hazardous facility, who may incur losses resulted from accidental environmental damage,
- state competent authorities (regional branches) engaged in assuring security of the territories, control of economic activities, and population health and well-being, and
- regional public authorities responsible for mitigation of consequences of technogenic emergencies occurred.

An operator of a high-risk facility would prefer to transfer his risk of being liable for third party and environmental damages to an insurer for a moderate insurance premium. The insurer carries out a survey of the source of environmental threat, estimates environmental risks (probability of the occurrence of the accident and magnitude of the predicted damage to affected parties) to calculate the rate for insurance premiums. The higher risk and predicted losses, the higher would be the premium. If the premium is affordable for the potential insured, the latter contracts environmental liability insurance, and in the case of an accident it is the insurer who is responsible for environmental cleanup, compensations, and legal costs. To minimize these costs, the insurer would invest into risk reduction, spending a portion of collected premiums to improve environmental performance of the insured. This reverse financial flow would originate from the specially allocated Environmental Protection Measures Reserve (EPMR) and potentially, from insurance company's profits. Another option the insurer may choose is to provide economic incentives for the insured to spend more on environmental safety at their own expense by

changing the rate and other policy conditions depending on the current level of risk. If the insured is not able to bear insurance costs, or the insurer is too risk averse to deal with estimated risks, the environmentally hazardous facility is not protected. In the case of the major accidents with off-site impacts, the operator is likely to be unable to cover all costs. As a result, the regional government has to bear these ‘extra’ expenses.

One should stress that willingness of a potential insured to contract any kind of environmental insurance has been crucial for EI development in the case regions. Insurers, as a rule, actively participated in EI promotion initiatives and were ready to enter into agreements (T-1, R-1, T-2, *pers. comm.*).

Members of the Russian EI policy community pointed at three major policy issues in ELI practical implementation at the regional level, namely:

- 1) What to pay insurance premiums from;
- 2) How to assess risks and allocate money for its reduction; and
- 3) How to enforce the environmental liability regime.

Particular features of ELI promotion in the case regions are analyzed below to explore solutions to address them offered by EI proponents .

6.4.1 Moscow Region experience with ELI development

As mentioned above, the Moscow Region was ‘a cradle’ of environmental insurance promotion, with first attempts to promote EI dating back to the early 1990s. The concept of environmental insurance appeared on the regional policy agenda when the economic performance of environmental harm-doers (mainly industrial enterprises) was extremely poor, and the issue of the source of ELI payments was of primary importance for moving forward.

One should note that the ‘polluter pays’ principle was legally introduced in Russia through mandatory payments for the negative impact on the environment (emissions, discharges, and waste disposal), usually referred to as ‘environmental pollution payments’ (EPPs). They are imposed on nature resource users as taxes.

Taking into account scarce resources of potential insureds, it was suggested to consider ELI premiums as investments in environmental impact mitigation. The Order On Calculating Payments for Contamination of Environmental Media, Waste Disposal and Other Negative Impacts and Their Maximum Amounts (Government of the Russian Federation, 1992b) allowed executive governments of Subjects of the Federation to vary EPPs, imposed on nature resource

users, on approval of regional MNR branches. Investments into environmental safety were taken as an offset for EPPs. Following the above-mentioned regulation, enterprises could contract ELI, and would have a chance to improve their financial and environmental performance without extra expenses.

This approach was tested during the implementation of the City of Elektrostal pilot on EI development (1994-1996) (Motkin, 1996). At that time, a portion of the EPPs was directed to the municipal extra-budget Environmental Funds (Section 6.2.2). The Elektrostal City Administration, who handled this Fund for Elektrostal, agreed to divert some amount of these payments to insurance companies involved in the MNR EI development Experiment. In the course of the Experiment, a survey of the city enterprises was undertaken to rank them according to their the potential to cause accidental damage to the environment. The City Administration facilitated negotiations between insurers and operators of environmentally hazardous facilities. As a result, several Elektrostal enterprises agreed to participate in the pilot and purchased ELI policies, which led to their insurance premiums having been deduced from the total EPP amount. To stimulate potential insureds' participation, the City Administration issued a special order that obliged all operators of environmentally hazardous facilities to contract ELI. Thus, a 'temporary' regime for mandatory ELI was introduced in the municipality (T-1, *pers. comm.*).

At that point in time, there were no formal procedures for spending funds accumulated in EPMRs. According to the Standard Provisions for Voluntary Environmental Insurance in the Russian Federation (MNR, 1992), the insured are allowed to spend a portion of the insurance premium for targeted environmental protection activities to improve environmental safety of the facilities covered by the insurance agreement. The Department of Insurance Supervision attempted to close this gap by a Letter on Preventive Measures Reserves for Voluntary Insurance (RF FSIS, 1995), but the area remained poorly developed by insurance supervision bodies. One should note that no regional legislation on environmental insurance was adopted in the Moscow Region either at the time of the Elektrostal pilot implementation or at further stages of EI promotion in the region.

One of the Elektrostal pilot objectives was demonstration of the economic effect of being insured for 'polluters'. A detailed spatial health risk assessment for the Elektrostal City was undertaken to explore the exposure of the city residents to accidental emissions, estimate losses resulted from health harm, and disseminate findings of the research among local residents. EI proponents attempted to invoke claims for compensation of harm to human health resulted from environmental pollution. In this situation, insured harm-doers would benefit from being protected since insurance companies would bear compensation costs, while those, who did not

contract insurance, were made to pay unexpected costs. This part of the experiment was not successful. Since the HRA methods applied were not formally approved, expert research findings were not taken as sufficient evidence to succeed in the court. For that reason, violators of environmental and health legislation were not punished, as it was expected. Therefore, the goal of the Experiment to demonstrate real-life benefits of being insured was not achieved (T-1, *pers. comm.*).

The idea of paying ELI premiums instead of environmental pollution payments gained support and was applied in other Russian regions, including the Leningrad Region (Section 6.4.3). However, Moscow Region Environmental Prosecutor's Office appealed against taking EI premiums as substitutes for environmental pollution payments¹⁹. As a result, economic attraction of the ELI scheme for enterprises was undermined, since: in order to insure their environmental liability risks they had to *increase* their expenses (T-1, *pers. comm.*). The policy of economic survival defined the behavior of economic actors in mid-1990s, and as a result, it is hard to find an operator of a hazardous facility who would be able, and willing, to invest into improving environmental performance on a voluntary basis. This put forward the idea of imposing compulsory ELI regime. In addition, the Elektrostal pilot emphasized the need for a unified and approved procedure for risk and hazard assessment for industrial facilities.

In 1995-1997, a series of federal laws were adopted which imposed an obligation to contract civil liability insurance for hazardous facilities (FARF, 1995c, e, 1997c, d, e). They were to provide financial guaranties for accidental damage caused both to third-parties and natural objects, and ensure coverage of remediation and compensation costs. In Moscow Region these laws were used as a legal basis for dealing with environmental risks related to operation of industrial facilities not formally registered as 'hazardous facilities' or mentioned in respective federal laws. Particular attention was paid to municipal solid waste (MSW) landfills. Municipal waste management is among the key environmental problems for the Moscow Region which currently serves as a recipient of a huge waste flow from the Moscow megalopolis.

Initially, a lot of efforts were invested to prove that these facilities pose significant threat to the environment and human health in order to include them into the list of hazardous facilities of the Moscow Region. In this case they would be subject to mandatory civil liability insurance in accordance with the Federal Law On Industrial Safety of Hazardous Facilities (FARF, 1997d). EI proponents prepared a draft order of the Governor on expanding mandatory ELI regime for

¹⁹ This mechanism of EI financing was claimed to be illegal at the national level in 2001 (MoT, 2001). According to the Russian Ministry of Taxation, regional executive authorities are not entitled to reduce amounts of taxes or grant an exemption to individual tax-payers.

MSW landfills, but it did not pass the legal expertise. The negative decision was based on the fact that municipal solid waste landfills were not included into the federal register of hazardous facilities. After that, it was decided to impose on operators of municipal solid waste landfills an obligation to provide financial guarantees of their ability to compensate for environmental and resulted third-party damage.

To support these activities, a detailed methodology for the assessment of potential environmental risk and economic losses, resulted from municipal waste disposal, was developed by the Market Economy Institute (see Motkin (2005) for details). This methodology was applied to conduct a survey of Moscow Regions MSW landfills and rank them by the level of aggregated environmental risk. Based on the survey findings, 24 out of 82 MSW landfills were included into the constantly updated priority list of ELI, maintained since 1997 (Moscow Region Environmental Committee, 1997). As a result, an insurance company started a special program on ELI for municipal solid waste management in the Moscow Region (Motkin, 2005).

In parallel with the efforts to introduce mandatory ELI in the region, several insurance companies (including Aura Insurance Company, Interros-Soglasie Insurance Company, and Itil Insurance Company) started promoting voluntary environmental insurance with the focus on property insurance against damages, caused by contaminated environment, and life insurance of on-site workers. The Moscow Region Government supported the ‘private’ initiative on environmental insurance (T-1, *pers. comm.*). In 1998, the Coordination Committee on Liability Insurance of Environmentally Hazardous Facilities in the Moscow Region was established (Governor of the Moscow Region, 1998)²⁰. Two districts (Podolsky District and Noginsky District) of the Moscow Region were selected as a platform for EI promotion activities. A number of enterprises, located in these regions, contacted EI policies.

However, 1998 default affected both insurers (Itil Insurance Company incurred severe losses and stopped its operations in the region) and particularly potential insureds. In addition, Governor’s elections resulted in resigning of the top government officials, including Environmental Ministry officials (T-1, *pers. comm.*). Raising EI awareness of new officials was the task for insurers. At the same time, insurers’ enthusiasm about adoption of a federal law on environmental insurance, which was the vehicle for all their EI promotion activities (e.g. establishing the Environmental Insurers Alliance), diminished. Nevertheless, there were a limited number of insurance companies who kept on dealing with EI in the region on an *ad hoc* basis, and a limited number of enterprises who contacted EI.

²⁰ Later on, it was converted into a special taskforce of the Coordinating Committee on Insurance of the Moscow Region Administration (Government).

6.4.2 Nizhniy Novgorod experience with ELI development

According to EI policy community members, the 1994-1996 MNR Experiment on EI development was expected to result in introducing mandatory environmental insurance in Russia. However, the only region with a comprehensive regional system of EI with a mandatory component (in the form of ELI) was the Nizhniy Novgorod Region. This system was developed under the framework of the special five-year agreement between the Government of the Russian Federation and the Nizhniy Novgorod Region Administration on delimitation of authority in possession, utilization, and management of natural resources and the environment (Government of the Russian Federation, Nizhniy Novgorod Region Administration, 1996). Article 3 of the Agreement pointed to conducting an Experiment on mandatory environmental insurance in the Nizhniy Novgorod Region.

The formation of the regional EI system started from the adoption of the regional Law On Environmental Insurance in the Nizhniy Novgorod Region (LANNR, 1997), which imposed compulsory ELI regime for environmentally hazardous facilities. Enterprises, whose operations could result in negative environmental and human health effects, were obliged to contract ELI and pay for it at their own expense (Art. 4). One should note, that insurance premiums were included into production costs-related expenditures of the insured (LANNR, 1997, Art. 12; FARF, 2000, Act. 263), which automatically follows from the mandatory nature of this insurance mechanism. Therefore, ELI costs were not revenue payments to affect economic performance of enterprises.

In order to implement ELI in the region, a series of regional normative acts were adopted to regulate the process of environment insurance from hazard assessment for the potential insured to mitigation of the industrial accident consequences, including:

- Regulation On the Nizhniy Novgorod Region Fund for Environmental Insurance (Administration of the Nizhniy Novgorod Region, 1997,1998),
- Regulation On Average Surveyors of Environmental Risks (Administration of the Nizhniy Novgorod Region, 1997),
- List of Environmentally Hazardous Enterprises (Administration of the Nizhniy Novgorod Region, 1997, 2000),
- Regulation On Organizing the Tender For Environmental Insurance in the Nizhniy Novgorod Region (Administration of the Nizhniy Novgorod Region, 1997), and

- Guidelines On Environmental Risk Assessment (Administration of the Nizhniy Novgorod Region, 2000).

The Nizhniy Novgorod Region Fund for Environmental Insurance (NNRFEI) under the regional Administration was established as a leading institution in the development of the regional EI system (LANNR, 1997; Administration of the Nizhniy Novgorod Region, 1998). It cooperates with regional environmental protection authorities dealing with both implementation of the mandatory ELI and promotion of the voluntary EI in the region. the NNRFEI functions include:

- *Organizational*: the NNRFEI serves as a hub between insurers and potential insureds; sets up a database on sources of negative environmental impacts at environmental hazardous enterprises, organizes training of ERA experts (average surveyors for environmental insurance), and facilitates the implementation of environmental mitigation programs,
- *Financial*: the NNRFEI accumulates a portion of insurance premiums collected by insurers. In the case of large-scale environmental accidents, these reserves should be used by insurance companies to fully indemnify the damage caused,
- *Regulative*: the NNRFEI defines insurance rates, amounts, and the procedure for paying insurance premiums, as well as fees for ELI, conducts tenders among insurers willing to undertake mandatory ELI, and establishes the system of monitoring of environmentally hazardous enterprises, and
- *Methodological*: the NNRFEI develops guidance on risk assessment for environmentally hazardous enterprises, assists in elaboration of ELI policies on insurance events and insured losses, contributes to development of environmental risk mitigation programs (action plans) for insured enterprises, and participates in their implementation.

Thus, the NNRFEI coordinates financial, research and development, and implementation aspects of environmental insurance.

The list (register) of enterprises subject to mandatory ELI was approved by the regional government (Administration of the Nizhniy Novgorod Region, 1997). It included enterprises which pose significant threat to the environment and human health. In the Nizhniy Novgorod Region this register embraced petrochemical plants, energy facilities, large transport objects, military objects, and water treatment plants.

Besides the NNRFEI, a service of average surveyors for environmental risks was specifically established to play the key role in the regional EI insurance mechanism. Average surveyors are involved in assessments of the current level of risk associated with a particular facility, advise on risk mitigation measures, and estimate mitigation costs. Based on findings of their investigations, the insurance rates and premiums are calculated. In the case of an accident, they assess the damage caused to environment, and resulted economic losses incurred by third-parties.

The adoption of the above-mentioned law and regulations led to a tangible practical outcome. For instance, in 1998-2000 predicted environmental losses were estimated for 99 enterprise of the region of which 81 was insured; the amount of collected insurance premiums reached 523,600 Rubles, environmental risk mitigation activities were undertaken by the largest enterprises, one insurance event was covered (IEPC, 2002). At the same time, the Nizhniy Novgorod Experiment has been under the threat of cancellation since the very beginning (L-1, *pers. comm.*). The regional Law On Environmental Insurance contravened the federal legislation, and in 1999 it was appealed by the Public Prosecutor of the Nizhniy Novgorod Region (LANNR, 1999). As a result, the Legislative Assembly of the Nizhniy Novgorod Region made a decision to change a certain provision of the regional law to harmonize it with the federal civil legislation. The term of the special agreement between the federal authorities and the Nizhniy Novgorod Administration (Government of the Russian Federation and Nizhniy Novgorod Region Administration, 1996) expired in 2001. No negotiations about its extension were undertaken since all pacts of on delimitation of authorities between the federal and regional public authorities were to be determined by June 2002 (FARF, 1999a). As a result, the Law On Environmental Insurance in the Nizhniy Novgorod Region became inoperative in 2002 (LANNR, 2002), and the long-term experiment on mandatory ELI in a particular Russian region was closed.

Thus, mandatory liability insurance, which ELI is part of, currently covers only specific economic activities regulated by special federal laws. As soon as ELI became voluntary for environmentally hazardous facilities, the demand for this type of insurance decreased, and the NNRFEI reserves to be spent on all kinds of EI promotion activities diminished drastically. EI experts note that in essence, special governmental institutions, such as the NNRFEI, are not necessary in the context of voluntary EI since promotion of voluntary EI is the insurers' job. Insurance rates, premiums, and preventive measures are to be addressed in bilateral EI contracts.

The Nizhniy Novgorod Experiment was unique, since most of the regional laws on environmental insurance were declarative and were not supported by respective regulations (L-1,

T-1, *pers. comm.*). At the same time, there were regions with no special regional EI legislation, which nevertheless demonstrated promising examples of EI practice. Below is the review of approaches to EI promotion other than direct imposing of compulsory ELI regime.

6.4.3 Leningrad Region experience with ELI development

The Leningrad Region competes with the Moscow Region on the title of the EI pioneer in Russia. Insurers are particularly strong in the regional EI policy community. It was this region, where the first Russian insurance company specialized on environmental risk insurance as early as in 1993. In 1994, the first Russian multi-stakeholder workshop on developing environmental insurance was held in Saint Petersburg, which gave rise to suggestions on practical implementation of environmental insurance in the form of civil liability insurance for accidental environmental and third-party damage.

The regional EI system evolved in an *ad hoc* way (R-2, *pers. comm.*). A package of regional EI legislation, developed in the course of a project on replication of Moscow Region experience on EI implementation (1998-1999), was prepared including a draft Law On Environmental Insurance, the Procedure for Environmental Audit, the List of Environmentally Hazardous Economic Activities and Facilities Subject to Mandatory Environmental Liability Insurance, the Regulation on the Guarantee Fund for Environmental Insurance, and the Regulation on Advisory Panel on Environmental Insurance in the Leningrad Region (Motkin, 1999). They passed public hearings, but were not adopted by the regional Legislative Assembly. Therefore, EI implementation followed provisions of the federal law.

The ELI implementation activities in the region covered the following sources of environmental and health hazards:

- Nuclear energy facilities;
- Waterworks;
- Enterprises whose operations involved handling explosive, inflammable, oxidizing and toxic substances (as defined in the Federal Law on Industrial Safety of Hazardous Installations); and
- Oil products supply facilities.

The general mechanism for applying the insurance to managing environmental risks, related to operations of these industrial facilities, is unified and stems from co-operation between special competent authorities, controlling these facilities, and insurers (R-2, *pers. comm.*). Special competent authorities, who issue operational licenses for these hazardous facilities, state

contracting ELI as a condition to receive such licenses. This requirement was initially introduced by the State Nuclear Operations Control Service (Gosatomnadzor) Branch for Northern-European Okrug (in 1994), then by the State Licensing Center (in 1997-1998), the regional MNR Department (Lenkomekologiya) (in 1997), the State Mining and Technical Supervision Service (Gosgortehnadzor) (in 1998), and the Neva-Ladoga Basin Water Management Service (in 1998) (Fedorov, 2005).

Although state competent authorities may make contracts with insurance companies directly, the common practice is to have a mediator, who provides for interaction among the respective state competent authority, potential insured, and the insurer. This mediator is an insurance broker accredited by the competent state authority. Special competent authorities conclude an agreement with the insurance broker and recommend enterprises under supervision to contract ELI when they apply for defining maximum permissible discharges and/or emissions, water supply and discharge limits, and other operational permits. The insurance broker, in turn, assists the potential insured to select the appropriate insurance program, and carry out pre-insurance survey of industrial facilities. In summary, one can identify the following functions of the insurance broker:

- Undertaking environmental risk assessment to predict losses resulted;
- Undertaking assessment of accidental damage in case loss occurred;
- Arrangement for compensation payments; and
- Financing risk reduction activities.

An example of an insurance broker working for ELI in the Region is North-Western Insurance Broker Center (NWIBC) established in 1996. Based on agreements with the Neva-Ladoga Basin Water Management Service (later FSI Baltvodhoz), it undertakes risks related to waterworks operations. NWIBC has signed co-operative agreements on risks of accidental damage to water bodies with 15 leading insurance companies in the region. The key criteria for the selection of these companies were their financial security, availability of respective insurance license (civil liability insurance of waterworks and environmental insurance), experience in undertaking a particular type of risks, and availability of re-insurance agreements. Since 1999, when the liability insurance for accidental environmental damage for waterworks was introduced, more than 700 ELI policies were purchased by enterprises operating in the Leningrad Region and Saint-Petersburg (Kuznechenkov and Vasilyeva, 2005).

The above-mentioned scheme was initially applied as early as in 1994, before the adoption of a specialized federal law (FARF, 1995c), to control ionizing radiation risks. When federal laws On Industrial Safety of Hazardous Installations and On Waterworks Safety enriched the national legislation, this mechanism was applied to respective facilities as well. Oil product facilities became subject to ELI within the framework of an experiment undertaken by the State Licensing Center in 1997-1998. More than 120 operators of petroleum storage depots and gas stations contracted ELI. Unfortunately, the lack of co-ordination of the Center resulted in quitting these activities (Fedorov, 2005).

According to the EI experts, imposing mandatory civil liability insurance for certain types of environmentally hazardous facilities created the legal framework for ELI. However, this did not lead to the rigorous consideration of environmental risks related to operations of such facilities. In practice, environmental component of the accidental damage remained poorly covered by civil liability insurance (R-2, *pers. comm.*). For instance, in 2002 about 2000 hazardous facilities in the North-Western Okrug contracted this type of insurance, as required by the law, however, only 10-15% of the insurance contracts were based on findings of environmental risk assessments. In general, contacting civil liability insurance has since been a formality to get the operational permit. An operator usually applies minimal insurance rate, as defined by the law, and does not consider case-specific risks and potential damages (R-2, *pers. comm.*). A unified environmental risk assessment procedure conducted by experts, playing on the insurer's side, partially remedies the adverse selection problem (see Section 3.2.2).

In principle, this scheme might be expanded to other types of environmentally hazardous facilities, for which mandatory civil liability insurance is not required. This would promote developing of voluntary ELI in the region (today's voluntary ELI practice is limited), but would be possible only if environmental authorities performed their control functions effectively and were committed to develop new approaches to manage performance of environmental hard-doers. Meeting both these conditions is currently questionable: even for hazardous facilities subject to mandatory insurance the requirement to issue operational permit only in the case of respective insurance policy availability has not been rigorously followed (Kuznechenkov and Vasilyeva, 2005). At the same time, the lack of clear legal provisions on ELI put these initiatives under threat of being treated as illegal.

6.4.4 Bashkortostan Republic experience with ELI development

In the Bashkortostan Republic ELI promotion activities were undertaken in the framework of the Ensuring Environmental Security in the Bashkortostan Republic in 2001-2005 Integrated Program under the aegis of the Ministry of the Natural Resources of the Republic (Government of the Bashkortostan Republic, 2001). These activities were aimed at practical implementation of environmental insurance (in the form of ELI) and pre-insurance environmental audit in the republic.

Project implementers relied on the ten-year experience on EI promotion in the other three case regions, and tried to avoid their mistakes (T-1, T-2, *pers. comm.*). A pilot municipality (the City of Tuymazy and the Tuymazy District) was selected to develop a step-by-step procedure for assuring compensation of third-party losses resulted from accidental environmental damage caused by operation of hazardous facilities. The Ministry of Natural Resources suggested this municipality as a ‘test site’ for ELI implementation for two reasons: i) concentration of environmentally hazardous facilities (mainly oil and gas production facilities, oil refineries, and chemical and petrochemical plants), and ii) high professional capacity of the local environmental protection authority. ELI development activities were focused on the interests of local residents, living under the high anthropogenic pressure, and were stimulated by failure of existing mechanisms to ensure environmental liability regime (Motkin and Tulupov, 2002).

During the first phase of EI promotion activities, it was planned to develop a package of normative documents and guidelines which would define legal and economic aspects of ELI for the pilot municipality and would be upscaled to the regional level in the short run. To undertake a pilot project, a research group of the Market Economy Institute, RAS (Moscow) and the Life Safety Research Institute of the Bashkortostan Republic worked out a methodology for pre-insurance audit of facilities potentially subject to ELI. It included a model to undertake a survey of the potential environmental harm-doers as well as techniques to identify environmental and health hazards, define the recipients of adverse impacts related to accidental pollution, estimate probability of environmental accidents, and predict the magnitude of environmental damage and resulted third-party losses (for detailed description of the methodology see Motkin and Tulupov, 2002). Findings of these site-specific assessments were to be summarized in the Expert Statement on Environmental Hazard Potential of the facility of concern, approved by the Life Safety Research Institute. Based on audit results, insurers would calculate insurance rates and premiums to offer to potential insureds, and prepared sample ELI contracts (T-1, T-2, *pers. comm.*).

At the implementation phase of the Tuymazy pilot, a list of enterprises to be involved in the ELI process was compiled. After the hazard assessment, industrial facilities were classified into three groups: of the high, medium, and low hazard potential (T-2, *pers. comm.*). Intensive consultations with potential insureds, represented by environmental or safety engineers, were organized through the mediation of the local environmental protection authority. At the beginning of the experiment, commitment of the potential policyholders to participate in ELI promotion was not high: out of 139 enterprises located in the municipality only 15 agreed to participate in the pilot assessments of their environmental hazard potential. According to project implementers, this was mainly explained by: i) low awareness of opportunities of applying insurance to management of environmental risks and improvement of environmental safety, and ii) unwillingness to spend extra money from revenues (ELI was undertaken on a voluntary basis) (T-2, *pers. comm.*). The local environmental protection authority, committed to ELI development in the district, participated in negotiations and used administrative capacity to approach potential policyholders and persuade them to participate in the pilot environmental hazard assessments.

Beside collecting data, pilot pre-insurance surveys were used to teach environmental insurance without preaching and build relationships between insurers and potential insureds. Therefore, this stage resulted not only in the snapshot of environmental hazardous potential of potential policyholders, but also in the improved knowledge on EI as well as increased overall environmental consciousness of industry representatives. At the end of the project, 15 ELI contracts were prepared based on the respective Expert Statements on Environmental Hazard Potential. The top-management of the companies declared their intent to contract ELI upon the completion of negotiations on technical details of the contractual agreements with insurers. Unfortunately, only one deal was eventually completed upon the end of the project term, when an operator of the local MSW landfill contracted ELI in 2002. At the same time, the project had an impact on EI stakeholders at the regional level. Thus, one of the leading and most polluting enterprises of the republic (Soda JSC, Sterlitamak) expressed interest in introducing pilot tested approaches to hazard assessment into its environmental safety practice²¹. The company was preparing to apply for an ISO 14001 certificate and considered pre-insurance environmental audit and contracting ELI as effective tools to improve their environmental safety and provide arguments for its adherence to the principle of ‘continuous improvement’ of its environmental performance. The recent change of the company’s top management suspended the work in this direction (T-1, *pers. comm.*).

²¹ Experts involved in EI promotion project of 2001-2002 were consulted on the assessment of predicted environmental damages of one of the production units, the heavy soda production unit of the Soda JSC (T-1, T-2, *pers. comm.*).

Of importance is that the Tuymazy pilot was pioneering in testing a scheme for compensation of third-party losses resulted from accidental emissions. In the course of the EI promotional project, accidental emissions at the production site of TuymazyNefit JSC occurred with exceeding the MPC of the pollutant in the site vicinity in several times. Third-party damage (health harm) for local residents, affected by the accident, was estimated. At the time of the loss occurrence, the harm-doer had an ELI policy from the Interros-Soglasie Insurance Company. This company born the third-party compensation costs. This event contributed a lot into understanding of ELI among the general public both in the Tuymazy municipality and beyond. It demonstrated that, owing to insurance, affected parties can receive compensations for damage without burdensome trials in the court (T-2, *pers. comm.*).

As outputs of the Tuymazy pilot, the following normative documents to commence large-scale practical application of ELI in the municipality were prepared (Motkin and Tulupov, 2002):

- Draft Decree On the Order of Environmental Insurance in the City of Tuymazy and the Tuymazy District,
- Temporary Order on Pre-Insurance Audit,
- Temporary Order on Environmental Hazard Assessment of Industrial Facilities for ELI Purposes,
- Temporary Order on Estimation for ELI Purposes of Losses Resulted from Accidental Environmental Damage,
- Temporary Order on Formation and Allocation for ELI Purposes of Environmental Protection Measures Reserves (EPMRs) of Insurance Companies with the Draft Environmental Risk Management Action Plan and the List of Environmental Risk Reduction Activities.

This package of normative documents was approved by the Bashkortostan Ministry of Environment in order to provide for continuing EI implementation in the Tuymazy District. Local self-government adopted these documents. However, the lack of regional and/or local sources of funding for EI promotion in the district led to suspending activities intended to be a follow-up of the project funded by the donor agency (T-1, *pers. comm.*).

At the end of the pilot, EI proponents reported to Bashkortostan Republic State Council deputies and other EI stakeholder representatives at the specially organized hearings on itinerary, held in the City of Tuymazy on November 23, 2001. The key issue in the agenda was the

development of the EI system in the Bashkortostan and the utility of the approaches tested in the course of the Tuymazy pilot to ELI implementation in the republic. Following the discussions at the hearings, a draft Government of the Bashkortostan Republic Decree On the Temporary Order of Environmental Insurance in the Bashkortostan Republic and supporting formal guidance documents were prepared. The Bashkortostan Government submitted a proposal on introducing a temporary order of environmental insurance to the Bashkortostan Republic State Council in 2002. However, this proposal has so far been under review. Due to tensions between the Federal Center and the Bashkortostan Republic, related to distribution of powers, political context for legal developments has not been favorable (T-1, *pers. comm.*).

6.5. Factors of success for EI promotion at the regional level in Russia: key lessons learnt

Based on the review of the EI promotion case studies, one can conclude, that success of EI promotion at the regional level in Russia is determined, among others, by:

- 1) *Support by the top officials*: the idea of environmental insurance should gain support of the key regional decision-makers responsible for environmental issues (in the Moscow Region it was a Deputy Head of the Regional Planning Department of the Ministry of Environment, in the Nizhniy Novgorod - Deputy Governor, and in the Bashkortostan Republic – the Ministry of Environment); this support is important both at the start-up point and at further stages of EI promotion activities in regions.
- 2) *Integration to strategic initiatives*: EI promotion activities benefit from linkages with relevant strategic initiatives on environmental protection, improving environmental control, and ensuring environmental safety of economic activities firstly at the regional and then at national level. This provides policy importance and financial security of the issue and targeted activities being undertaken (to be undertaken). Both regional and national special programs should be considered for this purpose, however, regional initiatives are particularly important.
- 3) *Reliance on the norms of the federal legislation*: in the current political context (strengthening power hierarchy and eliminating provisions of the regional legislation, which contravene the national law), one may conclude that regional innovations not based on the federal law are likely to be waste of time and resources. Based on the example of the Nizhniy Novgorod Region, it is hopeless to expect a regional Legal

Assembly to pass any law that would contravene provisions of the federal EI law, e.g. by introducing mandatory ELI. Adoption of a regional law on EI before the respective federal law would add little value.

- 4) *Developed insurance community*: since environmental insurance is part, of the overall insurance domain, commitment of insurance companies operating in the region, as well as their technical and financial capacities to develop this new area are crucial. In addition, availability of infrastructure and specific services (such as re-insurance) determines whether regional insurers may undertake environmental risks. Presence of insurance ‘think-tanks’ in the region is promising. As the example of the Leningrad Region showed, the role of insurance broker centers in enforcing ELI is paramount.
- 5) *Influential environmental authorities*: regional environmental authorities are the key policy actors in the field of environmental insurance due to their control function and resulting ability to manage the behavior of nature resource users/polluters. They are particularly effective in facilitation of relationships between insurers and potential policyholders if maintain good relationships with regional enterprises and enter into partnership with insurers. Their expertise and professional capacity sets up the ground for formal partnership with insurers to promote EI implementation.
- 6) *Developed civil society*: besides state competent authorities, it is NGOs, community interest groups, media, and other mouthpieces of the public whose opinion can influence the behavior of environmental harm-doers. They have both informal and formal tools to protect interests of residents living under the threat of industrial accidents. Community mobilization should be considered as an important part of EI promotion activities.
- 7) *Presence of innovation-receptive enterprises*: despite the importance of administrative pressure of potential insureds as well as other, ‘external’, factors stimulating contracting environmental insurance, internal motivation to build better business and improve the overall performance, including environmental performance, is among the key prerequisites for an enterprise to participate in EI promotion activities.
- 8) *Common vision of EI among regional competent authorities* engaged in ensuring environmental security: it is essential to develop common position on the environmental insurance issue and general strategy on its implementation in a region to communicate it to insurers and potential insureds.
- 9) *Use of regional experience with industrial hazard and risk assessment*: existing experience on assessment of environmental and health risks, as well as databases,

methods, and procedures (especially those formally approved) contribute to the success of EI promotion and should be primarily considered as a platform to move forward in EI practical implementation.

- 10) *Municipal pilots*: EI development pilots, implemented at the municipal level, have proved to be useful for the purposes of raising awareness of EI among all regional stakeholders, gaining hands-on experience with its implementation, and demonstrating tangible outcomes of its application.
- 11) *Collaboration with counterparts* in other regions: various knowledge transfer and experience sharing is beneficial both for beginners and regions, advanced in EI implementation.
- 12) *Extensive consultations with regional EI stakeholders* to achieve a consensus on the way regions may benefit from EI and whether it is affordable in terms of financial and other resources. All EI stakeholders should be involved, with particular focus on potential policyholders (both public and private), legislators, and regional tax authorities. The latter stakeholder group is an important consultee, since practical mechanisms for EI implementation should not jeopardize financial sustainability of potential insureds, and should not affect their revenues. It is extremely important to have a blueprint (road map) for EI implementation as an outcome of this consultation process, discussed with, and approved by, all regional EI stakeholders.