

7. Conclusions and recommendations

The current research explores environmental insurance as a ‘western’ approach to tackling the environmental issues, which has been introduced in the Russian policy context at the onset of transition period. It considers EI from international, national, and regional perspective. This chapter presents:

- key features of insurance as a tool, which can be used by environmental policy makers to manage environmental performance of economic actors and thus assure environmental security,
- findings of the study on the current state of the national environmental insurance system are presented, and
- ‘factors of success’ for promoting environmental insurance at the regional level in Russia derived from the regional case studies

In conclusion, possible approaches to introducing insurance into environmental security policies at the regional level in Russia are proposed.

7.1. Insurance for industry-related environmental risk management: international perspective

Environmental safety is proved to be regulated through imposing civil liability for environmental damage on potentially responsible parties in many countries. Having analyzed features of environmental risks related to industrial operations and innovative responses to them offered by the insurance industry, one can conclude that modern environmental insurance can potentially be an effective tool to reinforce environmental liability regimes.

Key **benefits** of insurance for environmental law and policy makers include:

1. *Damage prevention* – environmental preventive measures reserves created by the insurer are a source of funding environmental risk reduction activities related to operation of facilities.
2. *Regulation of harm-doer's behavior* – varying policy conditions (e.g. the amount insured, insurance rate, and duration of the agreement): the insurer is able to

manage the behavior of potential policyholders and create economic incentives for additional expenses on *ex ante* environmental risk reduction activities.

3. *Damage compensation* – resources accumulated in insurance reserves ensure that the harm-doer will be a reliable source of funds to compensate for losses of affected parties and finance all the necessary actions to mitigate adverse consequences of the insured event.
4. *Economic development promotion* – stimulating insurance industry as an important segment of the post-industrial economy generating investments into other sectors.
5. *Victim protection* – additional guarantees for protecting human rights, particularly the right for favorable environment and full damage compensation, are created to address environmental security concerns of the society..

Environmental insurance is able to perform its beneficial function of improving environmental safety liability regime provided that key groups of interest (insurers and potential insured) are able and willing to be involved in the process:

- There are incentives for the potential **insureds** to contract environmental insurance and recipients have resources to purchase the coverage;
- **Insurers** are able and willing to undertake the risks of concern and provide adequate coverage to the insured without infringing their interests.

There may be a temptation to force them to enter into necessary agreements through introducing compulsory insurance scheme (in most cases the system based on liability insurance is discussed). However, most of the policy researchers and analysts doubt that mandating environmental liability insurance would necessarily serve public interests. The key objection is to have such a regime is that this could reduce incentives for potential polluters to avoid causing damage and for insurers to promote environmental damage prevention. While considering the policy option to introduce compulsory environmental insurance for operators, the law and policy makers should carefully examine the maturity and competitiveness of the insurance market. The researchers are not optimistic about effectiveness of implementing the compulsory insurance scheme with regard to environmental damages if the required coverage is not available on the existing insurance market especially on the concentrated one. In addition, one should bear in mind the danger to be fully dependant on the insurance industry in implementing policies based on this type of insurance.

The fact that there are other tools to ensure financial security of polluters is repeatedly stressed. A number of authors advise not to stake on the insurance solely and develop the environmental liability regime with the requirement for economic actors to establish the financial security through any form of financial assurance. In this case the competent authority would assess if the form and amount of the financial security offered by the potentially responsible party is adequate on a case-by-case basis.

If the government to promote voluntary environmental insurance (both of first-party and liability type) in order to improve environmental safety of industrial operations, they should put their best efforts in encouraging the development of pollution insurance market to and let the ‘invisible hand’ of the market work for the benefit of the society.

To achieve this task the following policy options can be suggested:

1. define clearly financial risks associated with environmental liabilities and ensure their predictability;
2. focus on enforcement of existing environmental safety standards;
3. introduce the obligation to provide adequate financial security guarantee as a license condition in a view of preventing the risk of insolvency;

7.2. Current state of the national EI system in Russia

At the onset of the transition period in Russia, the idea of introducing insurance into environmental protection and natural resource management domain emerged. As a result, a concept of ‘environmental insurance’ (EI) was formulated, which was included into the list of economic tools of environmental policy-making.

In Russia EI was viewed as liability insurance for operators (and, in some cases, owners) of industrial facilities posing significant threat to the environment. Liability for third-party damages, resulting from environmental pollution, and environmental pollution damages per se should have been insured. The necessity to address the whole range of environmental impairments has been emphasized by a number of researchers (see, e.g. Kovalenko (2004), FC FARF (2004), Stepicheva (2005)). The proposals on expanding the scope of EI has recently been raised by several members of the EI policy community (see, e.g. Netsvetayev and Zhilkina (1999), Vasilyeva (2002), Kovalenko (2004), Bazhaykin (2005)). It was suggested to use various insurance mechanisms (property insurance, contractual liability insurance, financial risk insurance, life insurance) for protecting valuable interests against technology-induced environmental risks.

In the framework of the current research the study of the current national EI system included the analysis of five EI system determinants: *context* for EI system development, *EI legislation*, *methodology*, *institutional system*, and *practice*. The analysis proved the system under development.

The context for EI system development is heterogeneous: there are factors encouraging EI development (e.g. aggravation of environmental problems, increase in the amount of financial resources that both insurers and insureds can spend on EI, steady upturn of the national insurance market, and EI developments of in the CIS countries) and those acting as obstacles, including the low level of environmental consciousness of the society, administrative reforms weakening of the national system of environmental management, and stringent taxation policy.

A number of deficiencies in the EI legislation were identified. Most of national EI experts pointed to

- missing and/or controversial definitions of environmental insurance, environmental risk, environmentally hazardous objects (sources of increased environmental hazard), and
- the lack of normative acts regulating the procedure of environmental insurance: from estimating environmental risks to financing risk reduction activities, and detecting the environmental accidents, and covering the costs in case of loss occurrence.

On importance, the majority of experts support introducing *mandatory* environmental insurance in what relates to liability insurance of owners and operators of environmentally hazardous facilities against the risk of environmental impairment. Adoption of a Federal Law On Environmental Insurance is considered as a priority task, while its absence is viewed as the major environmental insurance-related legislative drawback. The Law should provide a comprehensive definition of environmental insurance in its contemporary understanding, consolidate its objectives and principles, define the range of risks insured and potential insureds, as well as the general procedure for environmental insurance, including financial mechanisms of its implementation..

Generally, the level of development of environmental insurance methodology and formal guidance in Russia is evaluated as satisfactory. It was pointed out that the environmental risk and damages assessment framework has developed, approaches to actuarial calculations for environmental insurance are developed (although their applicability in practice is disputed by some). Nevertheless, a lot of effort should be invested into improvement of the formal guidance

on all stages of EI procedure. The need for consistency in calculations of hypothetical (during the environmental risk assessment for insurance purposes) and actual (in case of loss occurrence) environmental damage was viewed as a key prerequisite for spreading EI under the voluntary EI regime.

The majority of the participants of the survey agreed that the country possessed sufficient capacity for the wide application of environmental insurance. However, analysis of the EI institutional capacity of the EI system stakeholders revealed low capacity of various insureds categories by all elements of the capacity. For secondary EI stakeholders low capacity of local authorities and judicial bodies, as well as the general public, raises most of concern. At the same time, high capacity of insurers, think-tanks and agencies having responsibilities in the field of and ensuring environmental safety of economic activities allows for optimistic predictions. In general, most of EI stakeholders, except for insurers need for building one or several aspects of their institutional capacity in the field of environmental insurance (see Table 5.3).

The practice of environmental liability insurance of polluting enterprises and targeted use of the acquired resources has so far been limited. In the majority of cases, enterprises contract environmental insurance only if this is directly required by the law, while the legislative provisions for voluntary environmental insurance in the country are considered satisfactory. Mandatory environmental insurance covers a narrow range of environmental risks and hazardous facilities, and the potential of voluntary environmental risks insurance are underused. The unsatisfactory state of the EI practice is viewed as one of the most significant incentives for the improvement of other elements of the EI system.

Based on the EI system study, the following main directions for the development of environmental insurance in the Russian Federation can be outlined:

1. Improvement of the legal and regulatory framework for environmental liability and environmental insurance.
2. Creation of actual economic incentives for the development of environmental insurance through changing taxation policy.
3. Enhancing state and public control over economic actors – potential causers of environmental damage.
4. Improvement of environmental consciousness among all stakeholders.

5. Raising awareness of the benefits of environmental insurance as a tool to provide for environmental safety among all stakeholders, especially among legislators, potential causers of damage, and the general public.
6. Improvement of the methodology for the assessment of environmental risks and damages, and practical application of the tools already in place.
7. Improved cooperation among state agencies dealing with ensuring security of population and territories on environmental risk assessment and allocation through insurance.
8. Strengthening EI policy community with involvement of potential insureds.

7.3. Introducing EI into regional environmental protection and management in selected case regions

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.

In a number of Russian regions decision-makers are interested in environmental insurance and supported EI promotions initiatives driven ‘externally’ or ‘internally’. Most of these ‘EI pioneers’ were regions covered by the MNR EI experiment of 1994-1996 (MNR, 1994). The EI promotion experience in four regions (the Moscow Region, the Leningrad Region, the Nizhniy Novgorod Region, and the Bashkortostan Republic) was subject to case study analysis.

Based on the review of EI promotion experience in four regions (the Moscow Region, the Leningrad Region, the Nizhniy Novgorod Region, and the Bashkortostan Republic) the author concluded, 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; 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) *Developed insurance community*: since environmental insurance is a 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.
- 4) *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.
- 5) *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.
- 6) *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.
- 7) *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.

- 8) *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.
- 9) *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.
- 10) *Collaboration with counterparts* in other regions: various knowledge transfer and experience sharing is beneficial both for beginners and regions, advanced in EI implementation.
- 11) *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.

7.4. Possible approaches to developing environmental insurance at the regional level in Russia: policy options

Insurance is a market mechanism regulating relationships between the insurer and the insured. In order to promote EI regulators engaged in developing and implementing public environmental policy are to create conditions that would stimulate both key EI actors to interact with regard to environmental risks.

The State can govern the behavior of economic actors through direct regulations following the top-down approach or through creation of economic incentives to make them interested in EI. Today, insurers demonstrate interest, sometimes caution, towards environmental risk handling. At the same time, most of the potential EI policyholders are not enthusiastic about protecting their interests against environment-related business risks. Therefore, EI promotion efforts of the interested public authorities should concentrate on motivation of potential insured to contract environmental insurance.

The following possible approaches to integrating environmental insurance into regional environmental policy domain are identified:

Approach 1. *Introduction of the compulsory environmental liability insurance regime* for environmentally hazardous facilities of the region, with the adoption of a specific regional Law On Environmental Insurance and a number of regulations concerned with all components of the EI process, from pre-insurance surveys and hazard assessments to payments of compensations to affected parties and conducting environmental damage prevention activities.

Approach 2. *Introduction of ‘voluntary-compulsory’ environmental liability insurance* (regulatory pressure on potential policyholders) through tightening the procedure for licensing of environmentally hazardous economic activities and issuing operational permits for environmentally hazardous facilities. It is often suggested to make getting the permit/license conditional to providing adequate guarantee for ability to compensate for third-party damages and environmental impairment. For some types of economic activities this requirement has already been introduced in the current legislation, and it is necessary to improve the control over its enforcement. Massive awareness raising of EI as a means to ensure financial security among licensees should accompany these regulatory developments.

Approach 3. *Development of economic leverage under the voluntary environmental insurance regime* (increased economic pressure on potential policyholders in combination with regulatory pressure) includes strengthening the state system for environmental supervision at the regional, and particularly at the local level to detect as many cases of violations of environmental law, natural resource use licenses, and operational permits as possible. This should be combined with i) enhancing the methodology for environmental damage estimation and economic valuation, and ii) targeted actions to stimulate affected parties to claim for their losses. These measures are to develop the court practice for environmental and related third-party damage indemnification. As a result, the economic pressure on harm-doers would increase considerably to bring them to the insurer seeking insurance protection from extra costs.

Approach 2. *Introduction of the ‘most-favored status’ for natural resource users voluntarily contracting any kind of EI* (creating economic incentives to potential policyholders without additional regulatory pressure). Possible methods of economic motivation include: i) regional tax allowances for EI policyholders, ii) integration of environmental insurance payments into production cost-related expenditures in the process of income tax calculation, iii) reducing the environmental pollution payments for natural resource users contracted environmental impairment liability insurance, and iv) financing environmental insurance payments of state-owned environmentally hazardous enterprises from the regional budget.

An alternative to these four options is a *‘no-action’ approach* when the state EI actors leave developing voluntary EI and attraction of potential policyholders at insurers’ own discretion, and assume that EI as a financial mechanism for resource transfer will develop gradually following the regional economy growth. Since there is an obvious commitment for action among the regional EI stakeholders, this option will not be considered further in this paper.

Today, most of EI experts agree that elaboration of EI legislation, particularly with regard to compulsory ELI, is the responsibility of the federal public authorities. Consequently, environmental insurance cannot be regulated by a special regional law (Bazhaykin, 2005). Moreover, this is an official position of the regional branches of the Ministry of Justice of the Russian Federation and regional Public Prosecutor’s Offices. These authorities appealed against a number of regional laws on environmental insurance developed and adopted in the 1990-s (e.g.

the Law On Environmental Insurance in the Nizhniy Novgorod Region) and opposed the adoption of new laws in this field (e.g. the Chuvash Republic Law On Environmental Insurance) (Kichigin, 2002; Bazhaykin, 2005; Motkin, 2005). Therefore, attempts to introduce compulsory EI (in the form of ELI) in a region, in the absence of a federal law on environmental insurance with provision on compulsory EI, would be a waste of time and resources. Alternatively, one could advise to invest efforts into promoting the elaboration and adoption of the necessary federal law through raising legislative initiatives at the Federal Assembly of the Russian Federation.

The order of licensing environmentally hazardous economic activities, including the list of documentation needed for obtaining a license/permit, is defined by normative acts of the federal level (the Federal Law On Licensing of Several Types of Economic Activities and RF Governmental Decrees) (RAFF, 2001). The existing lists of documents required for obtaining licenses for the use of water resources, subsoil, and forest assets, as well as for defining and approving maximum permissible emissions (MPEs), maximum permissible discharges (MPDs), and waste disposal limits (WDLs), do not guarantee environmental and third-party damage compensation, including liability insurance policy. Regional licensing agencies (regional branches of the Federal Environmental, Technological and Nuclear Supervision Service (Rostekhnadzor) and the Federal Environmental Management Supervision Service (Rospirodnadzor) of the MNR) do not have the authority to introduce additional region-specific requirements. Meanwhile, as demonstrated by the experience of Saint-Petersburg and the Leningrad Region, strengthening control over the enforcement of the legal requirement to provide financial guarantees for environmental and third-party damage compensation as a condition for approval of several types of economic activities would lead to certain positive effect on ELI development (Fedorov, 2005). At the same time, one should stress that strict regulatory approach to licensees' activities is fraught with the threat of corruption and selective application of legal norms.

There is a common agreement that top-down direct regulation in the field of environmental protection and natural resource management is ineffective in the absence of adequate social and economic preconditions. This is fully applicable to such a market-based tool as EI. Therefore, EI development activities should emphasize creation of internal motivation for the potential insured to apply to the insurer for protecting their valuable interests. Unfortunately, several promising taxation incentives for the insurers and the insured, e.g. inclusion of preventive measures reserves (PMRs) into insurance reserves and integration of environmental insurance payments into production cost-related expenditures in the process of income tax

calculation, are nowadays treated as illegal (MoF, 2001, 2002). This requires adoption of new schemes for economic stimulation of key EI stakeholders. Every scheme should be subject to the careful cost-benefit analysis.

Taking into account the current delimitation of powers between the federal and regional executive authorities, and other aspects of political and institutional context for EI promotion, the most suitable approach would be based on developing economic leverage under the voluntary EI regime (Approach 3).

EI opponents frequently refer to the lack of sufficient social and economic prerequisites for the wide application of EI. However, these prerequisites, or incentives, can and should be created, and this is the key contribution of the interested authorities in the development of this policy tool. Moreover, environmental insurance, as well as EI promotion activities, is one of possible points for interaction among the public, private and civil society to achieve sustainability at the regional level.