

5. Insurance for assuring environmental security in the Russian Federation: the study of the national environmental insurance system

At the very beginning of transition period, market-based environmental policy tools has been in the focus of Russian policy researchers. Environmental insurance was in the set of promising solutions to environmental problems jeopardizing national welfare and security. Although environmental insurance has been discussed both in the research and applied policy domain during last fifteen years and a great deal of effort were invested into its implementation into state environmental policy, it is still perceived as ‘novel’ and ‘uncertain’ issue the in the Russian environmental politics.

The current section presents findings of the study of the national system of environmental insurance as it stands using methodology described in Section 4.3. Following the historical perspective of introducing insurance into environmental protection and management field in Russia, analysis of EI determinants including Context, Legislation, Methodology, Institutional system, and Practice were undertaken in order to define priority directions for improving the system of concern.

5.1. Background

Among the basic tenets of modern environmental policy is the ‘polluter pays’ principle’, which provides for civil liability of industrial operators for the environmental damage resulting from economic activities, as well as for the obligation to compensate for the damage caused to ‘third parties’ as a result of pollution or other negative impacts on the environment. However, efficiency of such a scheme directly depends on the ability of causers of environmental damage to compensate for the damage, which emphasises the role of mechanisms to ensure financial security of enterprises whose activities may cause environmental damage.

Among the ways to provide the necessary financial guarantees for compensation of environmental losses is *insurance of environmental risks (environmental insurance)*. It allows not only for pooling resources for compensation, but also help prevent negative environmental impacts of economic activities through accumulation and effective distribution of investments

for environmental protection, which is one of the conditions of environmental safety of industrial enterprises and, consequently, regional security⁸.

In the last 10-15 years, environmental insurance has spread world-wide: the capacity of national environmental insurance markets has been growing, and the range of environmental risks covered has been expanding. Environmental insurance is increasingly used as an effective economic tool of state environmental policy, complementing traditional administrative methods of managing environmental safety.

With the transition to a market economy, interest emerged in the Russian Federation towards this branch of insurance, viewed as a source of complementary non-public financing of environmental protection measures of enterprises, environmental remediation and compensation costs. Pursuant to the legislation in force, not only should enterprises and organisations of any form of ownership compensate at their own expense for pollution or any other environmental damage, but should also prevent such damage (FARF, 1995d, 2002). However, many economic actors are not financially capable of technological modernisation and mitigation of environmental impacts of their activities. State budget funding covers only a minor share of expenditures for impact prevention and reclamation of the affected areas⁹. These result in intensive environmental pollution and natural resource depletion and eventually add to the unfavourable environmental conditions of a considerable part of the Russian Federation. Meanwhile, continuous environmental deterioration is considered as a threat to the national security (President of the Russian Federation, 1997).

Today, environmental insurance is acknowledged as one of the economic tools for regulation in the field of environmental protection and management (FARF, 2002, Government of the Russian Federation, 2002). Many analysts consider it among the most effective mechanisms to ensure environmental safety in Russia. (see, e.g., Motkin (1996), Tchepurnyh *et al* (1998), Netsvetayev and Zhilkina (1999), Oil, Gas and Law (2002), ADFC FARF (2004), FC FARF (2004)). Since 1991 significant efforts have been invested in developing the national environmental insurance system, including development of the legislative and procedural framework establishing an environmental insurance market (Motkin 1996; RAS, 1996, 2000,

⁸ The notion of environmental safety nowadays has a dual meaning. Depending on the context, this term can be used to define: 1) environmentally and healthwise safe economic activities (e.g. functioning of high-risk industrial enterprises), and 2) the levels of environmental and health protection against possible negative impact of various environmentally hazardous factors, including economic activities, and environmental and technogenic emergencies (Glenn and Gordon, 2001, Myshko, 2003).

⁹ According to the estimates, environmental protection-related expenditures in 2002 comprised one-tenth of the required amount (Akishin, 2003).

2002; Netsvetayev and Zhilkina, 1999; Bogolyubov and Senchenia, 2001; Davydova, 2002; Baydakov and Serov, 2003). However, even after 13 years, an opinion prevails that environmental insurance in Russia is still at the initial stages of its development (see, e.g., Milevich, 2003).

This paper attempts to explore the current state of the national environmental insurance system through the analysis of its determinants, in order to define priority directions for further development of this environmental security tool. The article is targeted at representatives of various groups of stakeholders within the environmental insurance domain, and primarily those representing the Russian environmental insurance policy community.

5.2. Contemporary understanding of environmental insurance in Russia

Despite wide application in the Russian research literature of the *environmental insurance* term, there is no univocal definition of this notion. Some Russian researchers regard it as a complex of insurance mechanisms aimed at protecting property interests of recipients in case of accidental unintentional environmental damage (mainly environmental pollution) (see, e.g., Netsvetayev and Zhilkina, 1999, Bazhaykin, 2002; Vasilyeva, 2002; Kovalenko, 2004; ADFC FARF, 2004). According to such interpretation, both economic actors - potential harm-doers, and economic actors - affected parties (users of natural resources, citizens of the RF, authorities, representing the state as the proprietor of natural resources and the guarantor of the citizens' right for healthy environment) can act as insureds. Several *types* of environmental insurance and their specific hazards are distinguished in this regard depending on the type of objects being insured, including:

- **liability insurance** of high risk enterprises and institutions which with high hazardous potential for environment and human health.
- **property insurance** – insurance of natural objects (land plots, subsoil plots, forest reserves, water bodies etc.) against damage resulted from operations of hazardous facilities.
- **personal insurance** of citizens – life and health insurance of physical persons against environmental emergencies resulting from technogenic accidents or natural disasters.

However, many Russian experts understand environmental insurance as liability (third-party) insurance for operators (and in some cases owners) of industrial facilities posing

significant threat to the environment (see, e.g., MNR and Rosgosstrah (1992), Averchenkov *et al.* (1995), Motkin (1996), Motkin and Tulupov (2002), Baydakov and Serov (2003)). According to this approach, the reason to contract insurance is the risk of being liable for harm and/or damage resulted from influence of polluted, contaminated or damaged natural object on recipients. It is liability insurance that emphasizes personification of the harm-doer, the recipient(s), and harm-doer's contribution to the losses sustained by recipients while the rest two types of insurance listed above do not focused on these issues (Motkin, 1996). Therefore, neither property, nor personal insurance against contamination or other negative impacts on the environment cannot regulate behaviour of economic actors and function merely as means to accumulate resources for compensation of possible losses by the insured. This statement is the main argument of those who disagree with the extended interpretation of the *insurance* term and who are against treating *environmental insurance* as a generic notion with regard to civil liability insurance against risk to cause damage to environment and resulting third-party injuries (otherwise defined as *environmental liability insurance*) (Motkin, 2005; T-1, *pers. comm.*).

The absence of a common definition of *environmental insurance*, as well as of a list of environmental risks and sources of significant environmental threats (which should not be limited to the approved list of hazardous facilities) is among the reasons for disagreement among stakeholders on the necessity of introducing mandatory environmental insurance and adopting a specific law on environmental insurance (see Section 5.3).

In author's opinion, environmental insurance is a generic term specifying utilisation of insurance for protection of interests of various parties incurring losses as a result of accidental unintentional environmental harm in the process of implementation of economic and other activities. A special role in providing environmental safety is assigned to accidental pollution liability insurance, while other types of insurance, including property, personal, contractual and self-insurance, can contribute significantly to the management of environmental risks linked to economic activities. Thus, environmental insurance in its wide sense represents activity aimed at establishing insurance coverage against environmental risks (Kovalenko, 2004).

Environmental risk is defined here by the author as a measure of **probability** of negative changes in the environment as a result of the influence of environmental hazards on one hand, and the **magnitude** of these changes on the other hand (World Bank, 1997). Magnitude of environmental risks is harm caused to the environment as a result of its pollution, depletion, damage, destruction, environmental abuse, degradation, and demise of ecosystems and landscapes (FARF, 2002).

As of today, the size of environmental damage is determined firstly by the size of losses (pecuniary losses) by recipients (parties incurring damage as a result of environmental pollution and other negative impact on the environment). Recipients can be legal and natural persons, the State, Subjects of Federation and municipalities, including both ‘third parties’ and harm-doers.

The insurance coverage can be provided for risks of sudden, unintentional environmental damage by particular sources of adverse impacts (Bazhaykin, 2002). The current research concentrates on environmental risks of the technogenic nature, associated with accidental pollution or other forms of environmental damage by sources of increased environmental hazard.

5.3. Introducing insurance into state environmental policy in Russia: key milestones

Speaking of developing environmental insurance in Russia, it is important to mention that it was only one of the market tools of environmental policy introduced at the beginning of the transition period to prevent and mitigate consequences of industrial accidents, as well as compensate for the accidental environmental damage. The introduction of the insurance mechanisms into environmental protection and management was initiated by one of the state institutions responsible for the environmental safety of the country, namely the Ministry of Environmental Protection and Natural Resources (Ministry of Natural Resources).

Numerous research publications on benefits of environmental insurance and its successful application to managing industrial risks abroad created conditions for such a decision. In the very beginning of establishing the national environmental insurance system, an opinion formed that direct adoption of EI systems of economically developed countries is impossible for Russia. An idea was maintained that fundamentally new approaches to developing environmental insurance are needed to correspond to the peculiarities of economic, political and social context of the country.

Environmental insurance was legally introduced in Russia in 1991 through the Law On Environmental Protection (SSRF, 1991). The Law provided for both voluntary and mandatory state environmental insurance of enterprises, institutions, organisations, as well as citizens, their property and incomes for industrial and natural hazards (Art. 23). In elaboration of this Law, Standard Regulations on the Order of Voluntary Environmental Insurance in the Russian Federation (MNR and Rosgosstrah, 1992) were developed which provided the basis for undertaking experiment for EI promotion carried out by the Ministry of Environment in 1994-

1996¹⁰. The experiment was aimed not only at strengthening voluntary environmental insurance, but also at pilot testing elements of mandatory environmental insurance in target regions (including but not limited to Arkhangelsk Region, Leningrad Region, Nizhny Novgorod Region, Perm Region) as well as municipalities (cities of St. Petersburg, Saratov, Elektrostal (Moscow Region), Sergiyev Posad District (Moscow Region)). Besides, the results of the experiment were intended to provide a basis for the suggestions on the ways to establish a unified federal system of environmental insurance.

This initiative contributed to the publicity of environmental insurance among concerned parties in the regions. Within the framework of the experiment, territorial environmental protection bodies, administration of the target regions, enterprises – nature resource users, and insurers joined their efforts in developing regulatory and procedural guidance for various components of environmental insurance: environmental hazard and risk assessment for industrial facilities, defining insurance rates and premium payment methods, collection and distribution of means to arrange for preventive measures. Environmental protection services gained allies – insurance companies willing to finance environmental programmes for minimisation of risks of accidents and catastrophes (Netsvetayev and Zhilkina, 1999).

By the end of the experiment in 1996, a trend to consider environmental insurance as liability insurance of enterprises-sources of high environmental risks against accidental environmental pollution and related ‘third party’ damage developed. In order to achieve maximum effectiveness of environmental safety provisions and protect interests of beneficiaries (besides natural and legal persons these can include the state as the proprietor of natural resources) this type of insurance had to become mandatory. In July 1995, a draft Federal Law On Mandatory Environmental Insurance was submitted to the State Duma of the Federal Council of RF for the first time (Motkin, 1996, 159-166) but was not passed in the first reading due to the incompleteness of the environmental insurance experiment run by the Ministry of Environment. The draft law was resubmitted (also unsuccessfully) to the State Duma in 1997 (Kichigin, 2002).

At the same time, mandatory civil liability insurance of economic actors being owners and operators of hazardous facilities against causing damage to life, health or property of ‘third-parties’ and to the environment (SSRF, 1993; FARF, 1995c, 1997d, e), and mandatory environmental impairment liability insurance in case of field development accidents (FARF, 1995e, f) were introduced in the 1990s in a number of sectoral laws. Thus, the requirement for environmental liability insurance was envisaged for some types of environmentally hazardous

¹⁰ The experiment was scheduled for 1994-1995; it was later extended until the end of 1996 (MNR, 1994).

activities (construction and operation of waterworks, operation of rocket and space complexes, industrial facilities producing, storing and using certain inflammable, explosive, oxidising, and toxic substances in specified volumes). This stimulated the development of the environmental protection and management-related insurance market.

Therefore, a certain, although fragmentary, regulatory framework was developed by 1998 to regulate insurance against environmental risks. The primary environmental protection institution in the country (State Committee for Environmental Protection (Goskomekologiya) between 1994 and 2000) continued its work over development of environmental insurance. In 1998, an Environmental Insurance Advisory Panel was established (Goskomekologiya, 1998c). It brought together representatives of more than thirty large insurance companies, think-tanks specialising in this issues, as well as representatives of interested ministries and agencies and financial institutions. The main task of the Panel was to develop the legal, regulatory and procedural framework for the introduction of environmental insurance, and plan of effective distribution of contingency funds acquired by insurance companies¹¹.

In 1998-2002, the Goskomekologiya (whose legal successor became the Ministry of Natural Resources (MNR)) developed a set of draft regulatory documents necessary for the introduction of environmental insurance, including:

- a list of types of economic activities subject to environmental liability insurance;
- draft environmental audit procedures for environmental insurance;
- draft environmental hazard assessment procedures for enterprises for accidental air and water pollution cases;
- draft procedures to assess losses resulting from accidental environmental pollution.

Among the functions of the Audit Panel were arranging seminars, round tables, and conferences to raise awareness of the key stakeholders, especially insureds and insurers, of environmental insurance. It is worth mentioning that since 1995 five regular conferences titled ‘Theory and practice of environmental insurance’ were held (in 1995,1996, 1998, 2000 and 2002), which discussed not only conceptual framework for the application of insurance in environmental protection and management, but also practical (legislative, economic and social) aspects of environmental risk insurance.

Resolutions on the necessity to have a unified law that would introduce the notion of mandatory environmental insurance and its aims, objectives and principles, and establish its

¹¹ The Environmental Insurance Advisory Panel stopped its activities when the Goskomecologia was dismissed in 2002 (R-1, *pers. comm.*; T-1, *pers. comm.*).

financial mechanisms, were adopted at all environmental insurance-related fora (including the Parliamentary hearings “On environmental insurance in the Russian Federation”, which took place on June 6, 2002). Despite this, adoption of such a law has been delayed.

In the last few years, MNR has concentrated its efforts on widening the scope of application of insurance in particular sectors of environmental management, such as management of water resources, subsoil resources, and forest resources. Respective subject subgroups were created within the Task Force on insurance for environmental protection and management established in the beginning of 2002 (MNR, 2001). The Task Force consisted of representatives of the Ministry, research organisations and the largest insurance companies. Within state environmental insurance development policy the emphasis is shifted from environmental liability insurance towards development of insurance of natural objects, contractual risks, financial risks of users of natural resources in what relates to insurance of rehabilitation expenditures (FC FARF, 2004).

Among the latest joint initiatives of MNR and the insurance industries in this regard was the experiment on forest fire insurance in the North-Western Federal Okrug in 2002 (MNR, 2002a, b), which continued in 2003 as a pilot project implemented by the MNR State Forest Service. The experiment aimed at development of natural resource insurance by users of natural resources (forest leaseholders) and the state (as the proprietor of the forests) aimed at forest fire protection, establishment of additional non-state sources of compensation for fire losses, and providing safety guarantees for long-term lease of forest assets.

In the framework of developing unified EI system the work on adopting the framework law on environmental insurance continues. At the moment, a task force, established under the Federation Council Committee for Science, Culture, Education, Health and Environment, is working on the draft Federal Law On Environmental Insurance. However, the mandatory nature of environmental insurance are not emphasized as it was before (R-1).

5.4. The existing EI system in the Russian Federation: review of determinants

5.4.1. Context for the national EI system development

The environmental insurance system develops in the changing political, economic and social conditions, which can both facilitate and hinder the process of introduction of insurance into the environmental protection and management domain.

Environmental and economic context

Since 1998 Russia has been experiencing improvement of macroeconomic indicators, such as growing gross domestic product (GDP) and volumes of industrial production (Goskomstat, 2004b). In parallel, environmental expenditures are also growing (e.g. in 2003 amounts of investments into atmospheric air protection increased by the factor of 1.6, into water and land protection and management – by the factor of 1.4 in comparison to 2002) (Goskomstat, 2004a, 8-9). According to Goskomstat, in 2003 total environmental protection and natural resource management expenditures in the country comprised 182.86 bln. Roubles, which represented a 2.6 times increase in comparison to 1999 (Goskomstat, 2004a, 12) (see Table 5.1).

At the same time, state of environment in the Russian Federation is far from satisfactory, and no trend of its improving has been observed. Increase of the total volumes of atmospheric emissions and of the number of cities with high and very high levels of the atmospheric pollution index (API) was recorded in 1999-2003 (MNR, 2005a). Reduction of surface water intake and of the volumes of contaminated wastewater discharge, as well as of the amount of pollutants discharged into water bodies have not been result in adequate improvement of quality of surface waters. The area of lands disturbed as a result of non-agricultural activities increased; significant territories were acknowledged as unsatisfactory based on the soil contamination index: 6 per cent of settlements and one-kilometre zones surrounding the sources of pollution, inspected between 1990 and 2003 were classified as dangerously contaminated with heavy metals soils, and 10 per cent were classified as moderately dangerous (MNR, 2005c).

Table 5.1. Key environmental and economic indicators of the Russian national economy for 1999-2003 (based on Goskomstat (2004a, b))

	1999	2000	2001	2002	2003
Gross domestic product (GDP) at factor cost, bln. Roubles	4823,2	7305,6	8943,6	10834,2	13285,2
Volume of industrial production (at prices of the corresponding years), bln. Roubles	3150	4763	5881	6868	8498
Environmental protection expenses in current prices, bln. Roubles	68,713	107,138	133,729	142,949	182,86
Environmental protection and natural resource management capital investments, bln. Roubles	11,308	22,,339	27,710	25,270	35,407
Atmospheric emissions from stationary sources, mln. t.	18,5	18,8	19,1	19,5	19,8
Water intake from natural water sources, bln. c.m	77,9	75,9	74,6	72,7	71,9
Discharge of contaminated wastewaters, bln. c.m	20,6	20,3	19,8	19,8	19,0
Toxic wastes generation, bln. t.	108	128	139	-	-
Land disturbed as a result of non-agricultural activities, 1000 ha	53	55	62	45	63

It is important to stress that the number of cases of high and extremely high levels of environmental pollution (caused by accidental emissions, discharges and spills) has been growing. In 2004, 863 technogenic emergencies occurred in the Russian Federation, which exceeded the number of such emergencies in 2003 (518) by 67 per cent (MEM, 2005). According to the MNR data, the greatest increase of accident rate occurred along the major pipeline transport, as well as on coal mining sites and during operation of hoisting facilities (MNR, 2005b). Risk of accidents remain high for gas supply facilities, at oil extraction fields, chemical, petrochemical and oil processing plants, as well as in the mining industry. According to estimates by the RAS Market Economy Institute, damage caused to recipients by accidental chemical air pollution and water contamination comprises 8.5-9.0 bln. Roubles per year (Motkin, 2005).

Among the primary causes of the current situation is deterioration of the basic production assets in the majority of industrial sectors. Despite the growth of the volumes of capital investments, aimed at replacement or reconstruction of basic production assets and, consequently, at improvement of environmental performance of industrial installations, this indicator remains high (at 53.6 per cent in 2003) (Goskomstat, 2004b). In the conditions of

growing production volumes, the increase of accidental pollution can lead to a considerable depreciation of the quality of environmental media, which jeopardises environmental security both at regional and national level.

Despite the legal requirement to fully compensate for environmental damage and third party injuries, the majority of enterprises – users of the natural resources are unable to cover costs for adequate environmental protection, as well reclamation and other mitigation costs related to industrial accidents (Oil, Gas and Law, 2002). The respondents were united in the opinion that nowadays accidental environmental damage caused by facilities-sources of environmental hazard is by no means compensated in full in Russia.

Therefore, one can conclude that even today, despite the economic upturn and budget surplus¹², financing of environmental protection activities in the country is insufficient for ensuring country's environmental security.

Environmental and social context

Meanwhile, in the opinion of many environmental policy analysts, there has been a steady decrease of the interest towards environmental protection and environmental safety issues in the Russian society since the early 1990s (see, e.g., Ritter and Tsirkunov (2003)). In 1995, less than one per cent of letters from Russian citizens to the President were devoted to the issues of environmental protection, which presents a devastating contrast with public opinions of the late 1980s – early 1990s (L-1). The majority of the respondents were of the opinion that in the last years these issues became 'third-rated' for the society at large, but are still of concern to the Russian non-governmental organisations (S-2, R-1, L-1, N-1, T-1, T-3). The rest of the respondents evaluated public interest towards such issues as moderate (S-1, N-2, T-2). Only one respondent considered issues of environmental protection as having high public repercussion (R-2). However, his opinion contradicts the outcomes of the January 2005 public opinion poll carried out by the ROMIR Independent Research Centre in order to find out what issues are considered the most important in today's Russia. The results of the research showed that development of the Russian economy is considered the priority by 45 per cent of the respondents (the highest score), while only 8 per cent (ranked 15 out of 20) of the respondents were highly concerned with environmental pollution issues (ROMIR, 2005).

¹² By December 1 2004, the Russian Federal budget surplus comprised 786.7 bln. Roubles (MoF, 2004).

Political and institutional context

Prioritisation of economic development issues by the public led to ‘de-ecologisation’ of state politics (L-1, R-1, T-1). This is illustrated by the fact that the first draft of the Concept and Plan of Socio-Economic Development of the Russian Federation of 2000 did not include environmental objectives (Ritter and Tsirkunov, 2003). The beginning of the new millennium was marked by the abolishment of the Russian Federation State Committee for Environmental Protection (Goskomekologiya) in May 2000, whose functions were transferred to the Ministry of Natural Resources. This decision was linked by some analysts to the belief widely spread among Russian decision-makers that policy pursued by the Goskomekologiya was hampering economic development (Ritter and Tsirkunov, 2003).

After Goskomekologiya abolishment, the Russian system of environmental protection authorities has gone through several reforms, the last one being carried out in the second half of 2004. The establishment of specialised agencies to control operations of industrial facilities (Rostehnadzor) (Government of the Russian Federation, 2004b) and natural resources exploitation (Rosprirodnadzor) (Government of the Russian Federation, 2004a) was accompanied by the dismissal of regional branches of MNR and establishment of territorial branches of both agencies. The sequence of reforms significantly weakened the system of environmental protection management, especially at regional and local levels, and generated doubts in political support (T-3, R-1, R-2, N-1, S-2).

At the same time, during V. Putin’s Presidency, the hierarchy of executing authorities is being systematically strengthened, and related environmental protection and management responsibilities of regional and local authorities is being limited (L-1, T-1). Agreements on distribution of the relevant powers between the national Government and regional administrations¹³, signed in the 1990s were not being extended upon the expiry of their terms or terminated. This resulted in interruption of a number of environmental protection and management-related experiments, including the long-term experiment on developing mandatory environmental insurance in the Nizhny Novgorod Region (implementation of which was possible

¹³ For example, an Agreement between the Government of the Russian Federation and the Administration of the Nizhny Novgorod Region On Delimitation of Authority in Natural Resource Possession, Use and Management, and Environmental Protection was signed on July 8, 1996 (Government of the Russian Federation, Nizhny Novgorod Region Administration (1996)) following provisions of the Pact On Defining Areas of Competence and Distribution of Powers Between Federal and Regional Public Authorities (President of the Russian Federation, Governor of the Nizhny Novgorod Region, 1996). The Pact was determined in 2002 (President of the Russian Federation, Governor of the Nizhny Novgorod Region, 2002).

only within the framework of ‘special’ contractual relations between the Centre and the pilot regions (L-1) (see (see Section 6.2 for details).

During continuous reforms of environmental protection authorities, the idea of introducing insurance into environmental protection was not forgotten. The recent work in this direction has been led by the Federal Council of the Federal Assembly of RF which ‘revived’ the idea of adopting a federal law on environmental insurance. A Task Force on elaboration of the draft law “On Environmental Insurance” under the Committee for Science, Culture, Education, Health and Environment has become a powerful actor in the state policy making on this issue.

Development of environmental insurance was mentioned among priorities for state environmental policy in a number of policy documents (e.g. Environmental Doctrine of the Russian Federation) (Government of the Russian Federation, 2002; Oil, Gas and Law, 2002; FC FARF, 2004). At the same time, the majority of the respondents were of the opinion that development of environmental insurance is not currently among the priorities for the State (R-1, R-2, N-1, L-1, N-2, T-2). They agreed that the reason for this is the absence of a powerful lobby for introduction of insurance into environmental protection and management (T-1, T-2, S-1, R-1, N-2, L-1), as well as the lack of support to the idea of environmental insurance within the authorities (R-1, L-1, N-1, N-2).

One of the survey participants (L-1) stressed that the vector of modern policy is defined by the President. Supporters of environmental insurance often cite a publication by V. Putin, whereby he highlights the necessity to concentrate efforts on the “introduction of the insurance and audit system into environmental management practice” (Putin, 1999). Their opponents, representing first of all business, and having significant influence on the Russian political arena, appeal to another widely recognised priority, that is diminishing the pressure on the manufacturers stress that introduction of mandatory environmental insurance in the form of environmental liability insurance would become an additional administrative obstacle for carrying out economic activities. Moreover, for manufacturers the most evident option to compensate insurance costs is to increase the price of production or services. Based on general laws of macroeconomics one can state that increase in production costs will definitely affect both producers and consumers (due to decrease in competitiveness and purchasing capacity respectively). This would finally result in lowering social welfare that contradicts the overarching goal of state policy (T-1).

The respondents also highlighted that the current taxation policy does not provide incentives for the development of environmental insurance (T-1, T-2, R-1, R-2, S-2, T-3, N-1). This is related primarily to the denial to expand the taxation regime, established for insurance

reserves (acceptance of deduction of the stated insurance reserve from the taxable base), to cover preventive measures reserves (PMR) of insurance companies (MoF, 2002a). The exemption of PMR from the taxable base when calculating income tax is viewed as the most important economic prerequisite of environmental insurance development, an incentive for insurance companies to invest in environmental protection measures.

An opinion exists that introduction of environmental insurance is incompatible with the existing system of (permitted) environmental pollution charges, which is often criticised for its weak stimulation of reduction of environmental impacts and high corruption potential (L-1). Supporters of this viewpoint believe that development of environmental insurance would be possible if this fiscal system is abandoned and charges for pollution and natural resource use are substituted with insurance premiums. Within the framework of the current environmental protection and management system it is necessary to develop a mechanism of allocation of environmental insurance payments to environmental investments and their integration into production costs-related expenditures in the process of income tax calculation (Motkin, 2005).

The possibility of Russia's joining the World Trade Organisation (WTO) was mentioned among important external political factors influencing the establishment of environmental insurance system in Russia (S-1, T-1). On one hand, this would make the Russian insurance market accessible for foreign insurers, thus encouraging competition and development of new trends, including environmental risk insurance. On the other hand, opening of the world markets may act as an incentive for the national manufacturers to pay greater attention to environmental safety of their enterprises in order to attract investors and improve competitiveness of their production.

Another factor of international policy is the trend to harmonise the Russian legislation with European requirements (L-1), including environmental protection and management requirements. It should be mentioned that the recently adopted by the European Council Environmental Liability Directive (EC, 2004) requires all European Union (EU) members to introduce insurance as one of the mechanisms to provide financial guarantees for rehabilitative measures and compensations to affected parties for environmental damage. There are no requirements for mandatory environmental insurance in the current EU legislation, and it is unlikely that such requirements would be adopted by EU in the nearest future. Hence, as concluded one of the respondents, introduction of mandatory environmental insurance in Russia is also unlikely, even in the presence of the necessary internal prerequisites.

Meanwhile, Inter-parliamentary Assembly of the Commonwealth of Independent States member states adopted a Model Law on Environmental Insurance in 2000 (IPA CIS, 2000) and developed draft Model Law on Mandatory Environmental Insurance in 2003 (IPA CIS, 2003) (to be passed soon). These model laws are to function as a pattern for drafting laws by the CIS member states. If laws on mandatory EI are developed and adopted in CIS countries this might stimulate discussion on introducing this type of insurance in the Russian Federation. However, tangible beneficial outcomes of these laws implementation (e.g., decrease in the number of environmental accidents, improved environmental performance of industrial enterprises, improved quality of environmental media) would have much more significant policy impact. By now, only Azerbaijan has enacted law On Mandatory Environmental Insurance (AR MM, 2002). It came into force in April 2002 but essential provisions for its enforcement (a standard insurance contract and a policy) were developed only by November 2003. At the moment, it seems to early to trace its effects for the environment.

5.4.2. Environmental insurance legislation

Following the broadened definition of *environmental insurance* in the framework of the current research, environmental insurance legislation is viewed here as a combination of legislative acts dealing with the application of insurance to protection of property rights of the state, legal entities and citizens against losses resulting from environmental damage caused by economic activities.

Norms regulating these relationships are spread over more than 100 federal legal and regulatory acts, the most important of which are listed in Table 5.2. The key role plays the RF Civil Code with elaborating legislative acts which deal with general issues of insurance, environmental insurance, civil liability insurance of owners of hazardous facilities, as well as with compensation for environmental damage resulting from economic activities. The majority of EI regulatory acts are temporary standard procedures and formal guidelines on mandatory liability insurance and assessment of potential damage to environmental media developed for specific industrial sectors (see, e.g., Major Pipeline Accident Damage Assessment Procedure).

The existing environmental insurance legislation has a large number of contradictions and gaps:

1. The notion of *environmental insurance*

The definition provided in the Federal Law On Environmental Protection (FARF, 2002) allows for the following types of insurance to be considered as environmental insurance, along

with ‘traditional’ civil liability insurance against environmental damage and third party injury resulting from accidental environmental pollution:

- Natural objects (e.g. landscapes, habitats, water bodies) insurance in the form of property insurance,
- Contractual liability insurance of users of natural resources,
- Financial risk insurance (e.g. cost cap insurance) related to environmental rehabilitation costs,
- Personal insurance against risks of technogenic accidents,
- Property insurance for legal entities against losses resulted from accidental environmental damage.

However, many by-laws present environmental insurance as civil liability insurance of economic actors-harm-doers (MNR and Rosgosstrah, 1992; Goskomekologiya, 1997; MoF DIS, 2000). The definition provided by the Law requires significant specification in order to eliminate the existing terminological uncertainty. The ‘valuable interest’ term needs to be specified and the nature of the insured events should be defined (Bazhaykin, 2005). Following the logic of a holistic approach to insurance for environmental risks as a specific type of insurance activities, it is necessary to describe the system of types of environmental insurance, distinguished depending on particular property interests being insured.

2. Environmental risks in the insurance context

The Russian legislation regulates environmental insurance fragmentarily, with particular attention paid to damages caused by environmental media (water, air, soil) *pollution*. Many other types of adverse impacts on the environment (e.g. activation of exogenous geological processes and changes in hydrodynamic structure of the landscape as a result of mining activities) are not subject to insurance coverage.

Insurance or other means to ensure financial security of potential harm-doers are provided only for few types of environmentally hazardous activities (operation of nuclear energy facilities (FARF, 1995c), waterworks (FARF, 1997e), and enterprises “producing, using, processing, generating, storing, transporting, and destroying” hazardous substances (FARF, 1997d), and space activities (SSRF, 1993). Thus, for example applying insurance to compensate for environmental damages resulted from land-use, water management, forest management, municipal waste management, and handling pesticides and toxic chemicals have not been fully regulated by existing laws.

Table 5.2. Key Russian federal legal and regulatory acts on environmental insurance

Title of the regulatory act	Summary
Constitution of RF	Guarantees the right to compensation for environmental damage resulting from violation of environmental law (Art. 42, 52, 53). Attributes legal control over insurance to the exclusive jurisdiction of the Russian Federation (Para. «O» Art. 71). Defines issues of environmental protection and management as subject to joint jurisdiction of the Russian Federation and Subjects of Federations (Para. «D» Art. 72).
Civil Code of RF	States key provisions for insurance regulation (Ch. 48), including liability insurance (Art. 927, 929, 931, 966, 969), property insurance (Art. 930), contractual liability insurance (Art. 932). Provides for full compensation for damage caused by a high-risk facility (Ch. 59, Art. 1064, 1069).
Law of RF On Insurance read with the Federal Law On Insurance in RF	Contains definitions of the key insurance notions and categories (insurance risk, insured loss, insurance coverage - Art. 9-10), outlines participants of the insurance process (Art. 4), and forms of insurance (Art. 3).
Federal Law On Environmental Protection	Defines the notion of environmental insurance, views it as element of the economic mechanism of environmental protection (Art. 18). States the necessity of full compensation for environmental damage by economic and other agents (ст. 77) and the compensation order (Art. 78).
Federal Law On Industrial Safety of Hazardous Facilities	Introduces mandatory liability insurance for operators of hazardous facilities against life and health injury or property damage caused to third parties and natural objects as a result of an industrial accident (Art. 9). Provides a certain notion of a hazardous facilities, introduces minimum insurance amount (Art. 15, Annexes 1, 2).
Federal Law On Waterworks Safety	Views civil liability risk insurance as one of key options to provide liability insurance coverage for waterworks against accidental damages. The Law states the owners and/or operators of these facilities must contract mandatory civil liability insurance for construction and operation phases (Art. 15) ¹⁴ .
Federal Law On Production-Sharing Agreements	Introduces mandatory (non-public) liability insurance against nature resource damages in case of accidents (Para. 2, Art. 7).
Federal Law On Application of Nuclear Energy	Establishes civil liability of operators of nuclear energy facilities for losses and damage caused by radiation to physical persons and legal entities, human health (Art. 53-55), and the environment (Art. 59).
Federal Law On Space Activities	Provides for liability insurance against life, health and property injury resulting from the implementation of space activities (Art. 25); health injury through affecting the environment during space activities is not prescribed but not excluded as well.

¹⁴ Operation of Article 15 in what relates to financial provisions for federal property insurance was suspended between 1 January and 31 December 2001 by the Federal Law No. 150-FZ of December 27, 2000.

Title of the regulatory act	Summary
Federal Law On Protection of the Population and Territories in case of Emergencies Resulted from Natural and Technogenic Hazards	Mentions insurance funds as a source of financing emergency response measures (Art. 24).
Federal Law On Subsoil Resources (Art. 51)	Provide for responsibility of citizens and legal entities for environmental damage (to particular natural objects) as a result of violation of natural resource management conditions, standards and regulations in force, and for compensation for the damage by the causer
Water Code of RF (Art. 106-110)	
Forestry Code of RF (Art. 83, 85)	
Atmospheric Code of RF (Art. 135)	
Federal Law On Fauna (Art. 56)	
Federal Law On Continental Shelf (Art. 8, 46)	
Federal Law On Sanitary and Epidemiological Well-being of the Population (Art. 8)	Confirm the right of citizens for full compensation for health damage caused by violation of environmental legislation as a result of economic activities (primarily excessive levels of environmental pollution)
Federal Law On Atmospheric Air Protection (Art. 32)	
Federal Law On Radiation Safety of the Population (Art. 26)	
Principles of the Health Care Legislation of the Russian Federation (Art. 66)	
Federal Law On Destruction of Chemical Weapons (Art. 19)	
Order of Goskomekologiya No. 486 of November 5, 1997 On Arrangement of Mandatory Liability Insurance against Accidental Environmental Damage at Hazardous Industrial Facilities	Were adopted as elaboration of the Federal Law on Industrial Safety of Hazardous Facilities. Define the directions for developing environmental insurance in terms of liability and nature resource damage insurance of owners of hazardous facilities
Letter of the Ministry of Finance of RF and Gosgortehnadzor No. 03-35/288 of April 23, 1998 On Liability Insurance for Hazardous Facilities	
Letter of the of the Ministry of Finance of RF No. 24-01-15 of March 30 On the Wording of Entries in the Annex (List of the Types of Insurance) to the Insurers' Licenses for Civil Liability Insurance for Hazardous Facilities	
Standard Provisions for Voluntary Environmental Insurance in the Russian Federation (approved by MNR and the Russian State Insurance Company, Decrees Nos. 04-04/72-6132 and 22, of December 3, and November 20, 1992, respectively)	Regulate voluntary environmental insurance
Letter of Goskomekolgiya No 03-22/24-330 of December 31, 1999 On the Use of Environmental Insurance Mechanism at Regional Level in the Russian Federation	Outlines the role of the state environmental authority (Goskomekologiya) in indemnifying environmental damage resulted from accidents at hazardous facilities
Rules of Civil Liability Insurance for Operators of Hazardous Facilities against Accidental Environmental and Third Party Life, Health or Property Injury at Hazardous Facilities (adopted by All-Russian Insurance Alliance on April 23, 1998 after approval by Rosstrahnadzor of the Ministry of Finance and Gosgortehnazor)	Define basic conditions for civil liability insurance for operators of pertinent facilities, unify insurance products to address this risk

3. Insurance objects and insureds

Environmental insurance is to protect property interests of physical persons, legal entities and the State resulting from occurrence of losses (which in the context of the current research is accidental unintentional environmental damage as a result of economic activities). Potential insureds include:

- Economic actors – users of natural resources,
- Economic actors – potential causers of environmental damage,
- Citizens of the Russian Federation,
- Governmental authorities and their representatives.

The development of the relevant national legislation followed the route of establishing in particular laws cases of insurance application to provide financial guarantees of compensating environmental damage and third party injuries. Not all sectoral regulatory acts that include norms on insurance for environmental protection and management unambiguously define the range of insureds. Some laws provide for precise criteria (e.g. the Federal Law on Industrial Safety of Hazardous Facilities), while others refer to list provided by a special federal law or by-laws.

4. Procedure for environmental insurance

The following key elements of the EI process are insufficiently regulated by existing legislation:

- *Assessment of environmental risks* for particular recipients (probability of loss occurrence and of the expected magnitude of the damage). Risk estimates are necessary for actuarial calculations of environmental insurance. This element of the EI process is somewhat clumsily defined by a number of researchers as “pre-insurance (insurance) environmental audit”¹⁵. The procedure for obtaining a license for this activity as well as the mechanism for confirmation of the assessment findings have yet to define.

¹⁵ Viewing environmental audit as an “independent assessment of environmental risks and damage” contradicts the legal definition of the ‘environmental audit’ term as a tool to evaluate compliance of an economic agent’s activities to the existing environmental protection standards (FARF, 2002; ISO, 2002). An alternative definition of this element of the EI process – ‘pre-insurance environmental assessment’ (T-1, *pers. comm.*)

- *Financing environmental risk prevention.* Insurers can form preventive measures reserves (PMR) to finance risk reduction activities (FARF, 1992b). These reserves must be spent exclusively for preventive measures (MoF, 2002a). Russian insurance supervision agency (the Federal Service for Insurance Supervision (Rosstrahnadzor)) requires creating PMRs both for voluntary (RF FSIS, 1995) and mandatory (MoF and Gosgortehnadzor, 1998) insurance of a defined number of environmental risks. However, the mechanism for spending of the reserves are not strictly resulted. For mandatory civil liability insurance for operators of hazardous facilities the percentage of insurance premium to be allocated for PMR is defined but preventive activities to be financed are not listed in the legislation. In turn, for voluntary environmental insurance option for PMR spending are prescribed with no formal guidance on PMR formation.
- *Establishment of the fact of occurrence of losses and assessment of damage.* The existing federal legislation on environmental insurance does not include provisions regulating activities of *average surveyors* who would identify causes of the accident, magnitude of environmental damage and third-party injuries for a particular loss occurrence. There is no mechanism developed for official confirmation of the calculated environmental damage.

In general, existing standards for application of insurance to environmental protection and management predominately refer to a specific law regulating the application of insurance in particular areas of environmental protection and management, which has not been adopted as yet.

Voluntary environmental insurance is implemented based on the Standard Provisions for Voluntary Environmental Insurance in the Russian Federation (MNR and Rosgosstrah, 1992).

The majority of experts support introducing *mandatory* environmental insurance in what relates to liability insurance of owners and operators of facilities that pose significant threat to the environment against risk of environmental impairment (N-1, T-1, S-1, R-2, N-2, S-2, L-1). EI experts agreed that all natural objects should be subject to insurance coverage but protected areas need for special attention. Currently, mandatory environmental insurance is carried out through including environmental risks into the list of risks subject to mandatory insurance by certain categories of enterprises – sources of increased hazard. At the same time, not all types of environmentally hazardous activities are covered by the insurance standards provided for in laws

regulating these activities, and the notion of “the source of increased environmental hazard” is not legally bound.

The lack of the federal EI legislation prompted a number of Russian regions to actively embark on the development of their own regulatory and non-regulatory legislative acts. This revealed another important contradiction in the relevant legislation. On one hand, environmental protection and management issues are subject to joint jurisdiction of the Russian Federation and Subjects of Federation (Russian Federation, 1993, Para. «d» and «k», Art. 72). This allows for adopting regional laws on environmental insurance which, however, must not introduce mandatory environmental insurance (RAS, 2000). On the other hand, the whole insurance regulation relates exclusively to the jurisdiction of the Russian Federation (Russian Federation, 1993, Para «o», Art. 71). Therefore, one can state that Subjects of Federation are not able to undertake lawmaking in the field. Regional branches of the RF Ministry of Justice and Public Prosecutor’s Office follows this opinion. They have appealed against a number of regional laws on environmental insurance adopted in 1990s (e.g. Law on Environmental Insurance in Nizhny Novgorod Region of 1997) and blocked adopting pertinent new laws (e.g. Chuvashskaya Republic Law On Environmental Insurance) (Kichigin, 2002).

In order to design an integral system of environmental risks insurance, the majority of experts consider the adoption of a Federal Law On Environmental Insurance as a priority task, while its absence is viewed as the major environmental insurance-related legislative drawback (N-1, L-1, T-1, T-2, T-3, R-1, R-2, S-1, S-2). The Law would aim to 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. In turn, standard insurance procedures should be developed for each type of environmental insurance to ensure execution of the law, which would establish a new area for the application of activities of insurance companies which can deal only with regulated types of insurance (Bazhaykin, 2005). During the round table on legal basis for environmental insurance held on 9 December 2004 at the Federal Council of the Federal Assembly of RF, a decision was made on development of a draft Law On Environmental Insurance based on the extended interpretation of the notion of environmental insurance (Stepicheva, 2005).

Survey participants pointed to regulation of environmental safety assessment and enforcement of legal norms on ensuring financial security of environmentally hazardous facilities as a condition to operate and on full compensation for environmental damage as key directions to improve the EI legal and regulatory framework.

5.4.3. Environmental insurance methodology

Environmental insurance procedural toolkit includes the following procedures for:

- environmental risks analysis for facilities posing significant threat to the environment (their activities may result in adverse effects in the components of the environmental and human health),
- calculations of predicted and actual losses as a result of environmental damage caused by technogenic accident or violations of environmental legislation,
- calculations of rates and insurance premiums based on the environmental risk and economic damage estimates.

For insurers environmental risk assessment represent a key difficulty in terms of practical EI application (T-1, S-2). At the early stages of the environmental insurance development in Russia, simple copying of foreign procedures was admitted impossible for Russia in the absence of the necessary statistical data for industrial accidents with recorded environmental impacts on one hand, and economic and geographical peculiarities of the country, on the other hand (Motkin, 1996; Kuznetsova and Sergeyev, 2001). On request of interested agencies and within the independent research projects a large number of environmental risk and economic damage assessment procedures and guidelines applicable for EI purposes were developed. They can be divided into two groups:

1. procedures supporting calculations of the probability of loss occurrence,
2. guidelines on estimation of environmental damage (as a magnitude of adverse consequences in the affected environment) resulting from various economic activities.

The analysis of the existing regulatory procedures is indicative of

- The sectoral nature of the regulatory basis: the majority of the existing procedures were developed for particular industrial sectors (primarily for oil and gas production and oil refining) and specific industrial facilities (e.g. waterworks (MFE, 2001), major pipelines (MFE, 1995), hazardous waste sites).
- The absence of a unified approach to the environmental hazard assessment for industrial facilities, and to the assessment of environmental risk magnitude: as assessment criteria, the size of the affected population, the

nature and amount of hazardous substances present at the hazardous facilities, the intensity of on- and off-site fires etc. are used.

- Component-wise approach to the assessment of environmental damage: assessment of losses resulted from contamination of particular environmental compartments (water bodies (Goskomekologiya, 1998a; MFE, 2001), soils (MNR, 1993; Roskomzem, 1995), air) is regulated by separate guidelines; integrated assessment of environmental damage has not been developed sufficiently. Methodology for environmental damage assessment for water bodies is the most elaborated (Bogolyubov and Senchenia, 2001).
- Orientation towards sectoral rates defined on the basis of annual production volumes of the hazardous facility (MNR and Rosgosstrah, 1992) rather than findings of site surveys and expert judgement when calculating insurance premiums.
- Lack of attention towards public consultations during environmental hazard and risk assessment.

Practical importance of some of the existing environmental damage estimation procedures is marginal. Some of these are still in force, although they were developed for the needs of the centrally planned economy and do not meet the requirements of the existing legislation and the modern approaches to environmental impact assessment. Others require simplification to enable their practical application. At the same time, a number of guidelines and techniques for environmental risk assessment and calculation of parametric characteristics of environmental insurance, developed by the Russian scientists in the recent years (see, e.g. Motkin and Tulupov (2002)), have not been approved even by the concerned institutions. It should be noted that in the process of selection of procedures for assessment of risks and damages, significant importance in the insurance practice is attached to the fact of their formal approval (firstly at the level of responsible Ministry, then by the Ministry of Justice).

The participants of the survey pointed at the necessity of consistency in calculations of hypothetical (during the environmental risk assessment for insurance purposes) and actual (in case of loss occurrence) environmental damage, which is impossible in the absence of an adopted unified calculation procedure (R-1, T-1, T-2, R-2, S-2). The MNR sees its task as the analysis of the existing procedures aimed at defining the regulated scope of activities, definition of gaps and inconsistencies with the modern requirements, and compilation of a List of Guidelines, sufficient for implementing environmental insurance, and its registration with the

Ministry of Justice. So far the absence of a single set of inter-agency analytical and procedural tools is the major drawback of the existing regulatory basis for environmental insurance.

5.4.4. Institutional system of environmental insurance

The issue of environmental insurance involves those who actively participate in developing and implementation of state environmental policy, as well as the ‘recipients’ of such policy who influence the relevant decision-making process indirectly. Figure 5.1 shows the system of EI stakeholders. Below there is the description of their functions in the context of environmental insurance.

Among parties, potentially interested in, or concerned with, this process, are a wide range of representatives of all three sectors of the society – governmental institutions, private sector and non-governmental institutions. These can be classified into three groups:

- I. Direct participants of EI relations (*key EI stakeholders*):
 1. *Insurers* that secure property interests of economic actors: state (State Insurance Company, National Reinsurance Company) and private insurance and re-insurance companies, as well as other agents of the insurance industry (e.g. mutual insurance societies, insurance pools, and insurance brokers).
 2. *Insureds (actual and potential)* – economic actors whose property rights are being protected by environmental insurance agreements. Environmental insurance in its wider sense allow the following entities to act as insureds:
 - private and public enterprises and organisations whose activities pose threats to the environment and may cause accidental unintentional damage to natural objects.
 - banks and other credit organisations financing investment projects whose implementation can lead to environmental damage.
 - executive authorities providing public services in the field of nature resource management (Federal water resource, forestry and subsoil management agencies of MNR) and their territorial branches,
 - citizens of the Russian Federation who are residents of the territories at the risk of technogenic emergencies.

All above-mentioned stakeholders can act as beneficiaries according to environmental insurance agreements (as insureds or ‘third parties’, depending on the type of the insurance).

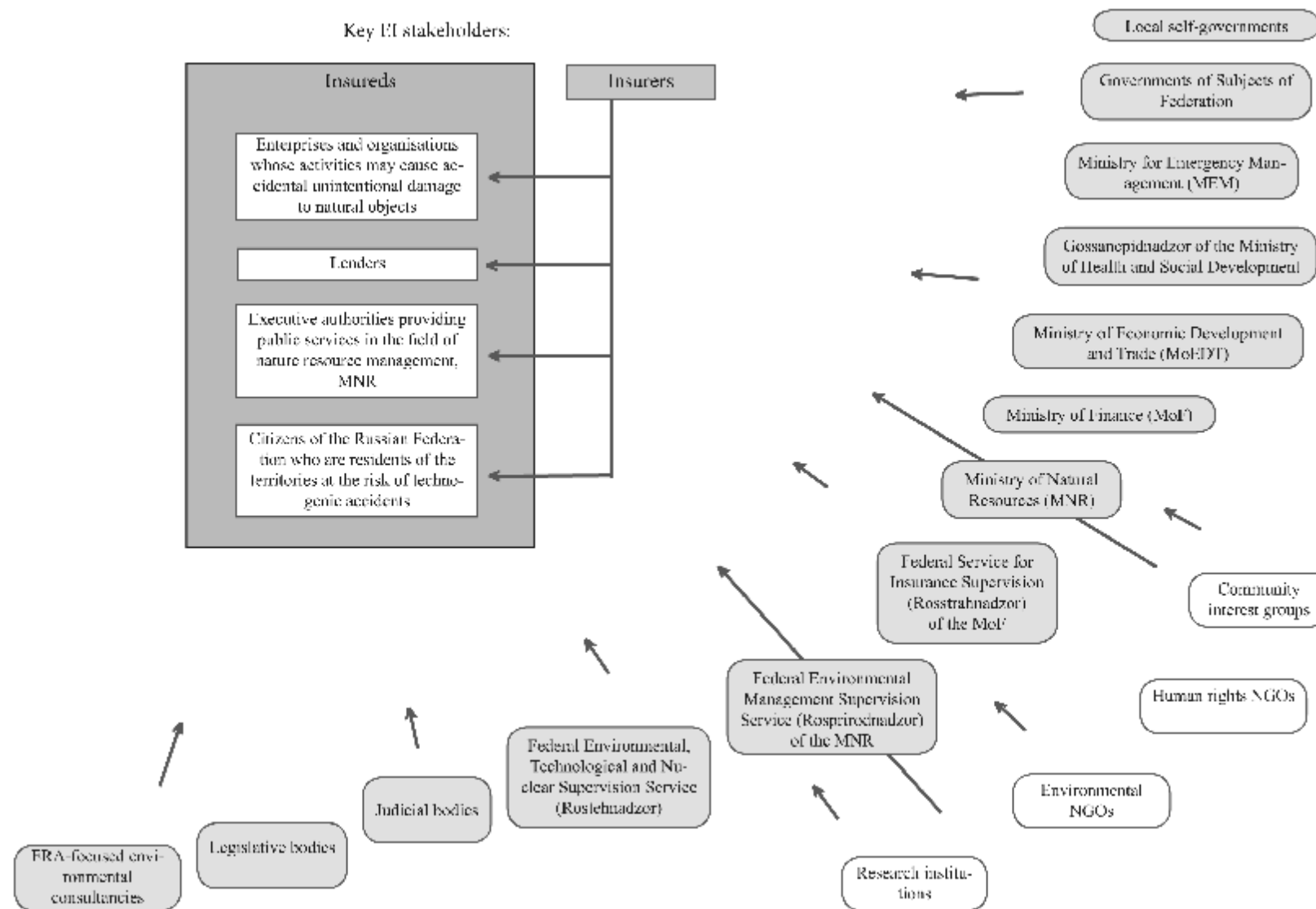


Figure 5.1. The system of EI stakeholders in the Russian Federation

II. Institutions with formal (financial, legislative, regulatory) instruments of control over the activities of the key EI stakeholders (*secondary EI stakeholders*):

3. Specialised environmental consultancies engaged in environmental hazard and risk assessment.
4. *Legislative bodies* responsible for developing and adopting legislation regulating environmental insurance and environmental liability.
5. *Judicial bodies* reviewing claims for environmental damage-related losses:
 - courts of the general jurisdiction (if at least one of the parties to proceedings is a physical person),
 - arbitration courts (dealing with economic disputes between legal entities).
6. *Executive authorities* performing the function of *control and supervision* over the activities of EI insureds and developing regulatory framework for their operations: enterprises – sources of environmental impacts, including hazardous facilities – the Federal Environmental, Technological and Nuclear Supervision Service (Rostehnadzor), enterprises and organisations developing natural resources – the Federal Environmental Management Supervision Service (Rosprirodnadzor) of MNR – and their territorial branches. These agencies are entitled to claim against environmental damage caused by violation of environmental legislation.
7. *Executive authority* that control organizations involved in insurance operations and develop regulatory framework for their activities (Federal Service for Insurance Supervision (Rosstrahnadzor) of MoF) and its territorial branches.
8. *Executive authorities* responsible for development and implementation of *state policy* and *regulations* in the field of environmental protection and management (Ministry of Natural Resources (MNR)), budgetary, tax, insurance, and bank activities (Ministry of Finance (MoF)), economic development, management of federal assets, insolvency, entrepreneurship and small business (Ministry of Economic Development and Trade (MoEDT)).
9. *Executive authorities* responsible for the safety of the population (Federal Consumer Rights and Human Well-Being Supervision Service (Gossanepidnadzor) of the Ministry of Health and Social Development, responsible for the sanitary and epidemiological well-being of the population,

Russian Federation Ministry of for Emergency Management (MEM), responsible for protection of the population and territories in cases of emergency, including technogenic emergencies).

10. Governments of Subjects of Federation and local self-governments, which can include contracting environmental liability insurance into conditions for operational permits for enterprises.

III. Interested parties unable to regulate formally activity of primary and secondary stakeholders, but influencing the development of the relevant EI-related state policies (*ancillary EI stakeholders*):

11. *Non-governmental organisations* and *community interest groups* engaged in protection of civil rights for favourable environment, environmental management and sustainability issues. They can represent interests of citizens, sustaining losses as a result of environmental pollution, in court, and also raise public awareness.
12. *Research institutions* engaged in developing methods for environmental hazard and risk assessment, environmental control over economic activities, research community is responsible for promoting the concept of environmental insurance, elaborating EI conceptual and methodological framework, and devising practical recommendations in the field.

Besides, one should single out a group of experts closely dealing with environmental insurance issues, who are influential among politicians and decision-makers. While representing various stakeholders, they form a *EI policy community*, and act as the main driving force of the introduction of insurance mechanisms into environmental protection and management. The core of the Russian EI policy community is represented by insurers, representatives of state environmental protection and industrial safety agencies, and personnel of research and educational institutions focused on economic regulation and financing environmental protection activities. It should be stressed that potential insureds and beneficiaries (industrial enterprises, credit organisations, and civil associations) are practically not represented in this community.

In order to describe the state of the EI institutional system stakeholder capacity was analysed. The following elements of the stakeholder capacity were defined:

1. Awareness of environmental insurance, its benefits and limitations, among the stakeholders,
2. Level of stakeholder interest in the EI development,
3. Involvement in developing state policy for introduction of insurance in environmental protection and management,
4. Professional resources/specific expertise enabling performance of EI functions,
5. Availability of financial and other resources necessary to perform EI functions.

The findings of the assessment of institutional capacity of Russian EI stakeholders are presented in Table 5.3.

1. **Awareness** of the opportunities related to introducing insurance in environmental protection and management and of its potential threats in the Russian society is generally low. Stakeholders best aware of EI issues are insurers, who view this type of insurance as one of the prospective, but challenging directions of the insurance industry development, and representatives of environmental protection institutions and scientific research organisations specifically dealing with issues of economic regulation and financing environmental protection activities. The experts participated in the survey pointed at the lack of ‘insurance culture’ and, as a consequence, the lack of knowledge about environmental insurance, common for all categories of potential beneficiaries. The lack of environmental insurance awareness among legislators reflects the low level of the relevant knowledge of the population.

2. The analysis showed that specialised companies providing environmental consultancy services, insurers and state environmental protection agencies are among the most **interested** in introducing of insurance into environmental protection and management domain. While environmental protection bodies hope to attract resources of private business for environmental protection, the rest of stakeholders’ motivation is consideration of commercial benefits. Embracing a new group of risks to insure is expected to lead to the increased number of insureds, expansion of insurance portfolio, growth of the volume of insurance payments, and finally to the increase in profits of insurance companies. According to the comments by practitioners, insurance companies are incapable of independent assessment of environmental risks and losses and rely on attracting capacities of specialised organisations.

Table 5.3. Evaluation of institutional capacity of EI stakeholders in the Russian Federation

Elements of institutional capacity	Awareness of environmental insurance issues	Interest in developing environmental insurance	Involvement in developing state environmental insurance policy	Professional resources/level of specific expertise	Availability of the necessary resources
EI stakeholders					
Insurers	3	3	3	3	3
Environmental consulting organisations	3	3	2	2	3
MNR	3	3	3	2	2
MoF	2	1	1	2	2
MoEDT	1	1	1	2	2
State supervision bodies					
Rostehnadzor	3	3	2	3	2
Rospirodnadzor	2	3	3	2	3
Rosshrahnadzor	1	1	1	2	2
Institutions responsible for well-being of the population (Gossanepidnadzor, MEM)	2	2	1	2	2
Industrial enterprises	1	1	1	1	2
Credit organisations	0	1	0	1	1
Legislative authorities	1	1	2	2	1
Judicial bodies	2	0	0	1	1
Local self-governance	1	1	1	1	1
Environmental NGOs	2	2	2	2	2
Human rights NGOs	2	1	1	2	1
Research organisations	3	3	2	3	2
General public	1	1	1	0	1

Note: the following scale was applied during the evaluation:

0 = practically absent

1 = low

2 = medium

3 = high

Executive bodies dealing with national economic development are suspicious about environmental insurance. The main concern is insurance expenses which be automatically included into production (service) costs to make them more expensive and affect the well-being of the population.

A consistent opponent to the development of environmental insurance as a separate type of insurance has been such a powerful political actor as the RF Ministry of Finance. The position of this concerned institution on EI concept is as follows: the idea of insurance as an economic lever to provide environmental safety is an illusion (MoF, 2002b). Besides, the Rosstrahndzor views environmental insurance only as a form of civil liability insurance for operators of hazardous facilities and does not consider it sound to treat environmental insurance as a specific type of insurance.

The least interested in the development of insurance are courts, which is not surprising taking into account the current workload of courts of the general jurisdiction, as well as, unfortunately, potential insureds – industrial enterprises and credit institutions. The enterprises' scepticism results from perception of environmental insurance as an extra 'tax' (though taxes and insurance payments are different types of payments by nature), a burden for the producers, and hence as an additional administrative barrier for economic activities. Besides, an opinion exists among representatives of industrial enterprises that the modern level of development of the regulatory and procedural basis is insufficient for the realistic assessment of environmental damages. For Russian credit organizations environmental aspects of investment projects and environmental credit risks are not an important criterion for giving loans.

3. Development of state environmental insurance policy is formally a prerogative of MNR. Until recently, this institution acted as the main initiator of developing environmental protection-related insurance. However, with the weakening of environmental protection agencies in the course of administrative reforms the ideological 'centre of gravity' has shifted to the Federal Council of Federal Assembly of RF (see Section 5.4.1).

The main tool to foster a dialogue on this issue between the concerned parties is creating taskforces mainly involving practitioners. Methods of wider involvement of stakeholders, including parliamentary hearings, are applied rarer.

Insurers, designated environmental protection and industrial safety authorities, and legislators are **the most active in developing public environmental insurance policy**. At the same time one should note, that insurer's enthusiasm about introducing environmental insurance is much lower today than it was in mid-1990s due to protracted elaboration of necessary

legislation and eliminating important tax incentives (see Section 5.4.1). Considerably high interest this topic generates also among the MEM and the Ministry of Health and Social Development. It was repeatedly stressed that MNR and these institutions not always effectively interact in the matters concerning ‘related’ issues, especially at the regional level (see, e.g., Kichigin, 2002). These stakeholders as well as financial supervision institutions, are likely to choose to stay away from consultations on environmental insurance if not involved in particular consultation events and/or discussions of specific EI aspects.

The least important role in discussions of environmental insurance policy play representatives of non-governmental organisations, particularly human rights organisations, legislative bodies, and local self-government authorities. Experts agreed that the reason for this is the lack of efforts to involve these stakeholders in consultations. The low activity of industrial and financial agencies during open consultations was explained by their deliberate non-participation. The latter could be linked to the fact that the majority of the respondents were convinced that there is lobbying by representatives of the industry against the introduction of environmental insurance taking place in Russia.

4. The issue of ability of stakeholders to fulfil their functions in the environmental insurance system and whether they possess sufficient specific knowledge, is controversial. This element of the institutional capacity is particularly important for the primary stakeholders. In the opinion of the experts, apart from scientists, high **technical capacity** is typical for insurers and representatives of designated authorities dealing with industrial safety. At the same time, the lack of professionally trained personnel is regarded by the existing research literature as one of the problems of the development of environmental insurance in Russia (Netsvetayev and Zhilkina, 1999).

The level of EI expertise of all other parties representing public authorities was estimated as medium. Professional capacity of environmental consultancies was evaluated controversially, but overall the level of their professionalism was considered as satisfactory. Environmental non-governmental organisations are better prepared for the performance of their functions in comparison to human rights organisations. The low level of specific knowledge of representatives of industrial enterprises, banks, and courts and local self-government bodies on environmental insurance correlates with their low interest towards the its development. One should highlight that training is necessary for all EI stakeholders, since this is a new field with limited practice in Russia so far.

5. **Availability of financial and other necessary resources** is often viewed as the major factor determining the performance capacity of particular stakeholders and the system as a whole. Insurers, consulting companies, and Rostehnadzor were considered the most successful in this regard. Meanwhile it is worth mentioning that the capacity of Russian insurance market allows only for a very conservative prediction regarding the sufficiency of financial resources of insurance companies to accept environmental risks and providing adequate insurance coverage in case of increase in the demand for environmental insurance.

Despite the general opinion regarding the lack of financial resources for environmental insurance of enterprises being sources of environmental hazard their overall resource availability was evaluated by the experts as medium while the local self-government bodies and courts are perceived to lack necessary resources including financial to perform their functions.

5.4.5. Environmental insurance practice

The practice of environmental insurance reflects the use by stakeholders of the potential of the existing EI regulatory and methodological framework.

The majority of the survey participants considered economic conditions for the development of environmental insurance market in Russia as relatively favourable (S-1, T-1, N-2, L-1, T-2). The official statistics shows that the economic growth of the recent years has led to the remarkable progress in the development of the insurance industry. By January 1, 2005, 1280 insurance organisations were registered with the State Insurers Register (MoF, 2005). Total capital of the Russian insurance companies increased from 9.6 bln. Roubles in 2000 to 55.8 bln. Roubles in 2003. The volume of insurance premiums collected by insurance companies is increasing (the aggregate insurance premium comprised 179.9 bln. Roubles in 2000, 300.4 bln. Roubles in 2002, and 471.6 bln. Roubles in 2004) (MoF DIS, 2003; MoF, 2005). The competition within the industry is also growing, leading to insurers aspiring to master new trends and improve the quality of their services. Insurance industry has gradually become more important for the national economy: the share of insurance premiums in GDP in 2002 comprised 2.8 per cent and, according to the Rosstrahnadzor's predictions, should reach 5 per cent in a mid-term perspective. Thus, the insurance industry is currently rapidly developing and, according to the expert opinion, the positive trends, including the growth of the profits from primary activities, expansion of the insurance portfolio, and strengthening of the financial sustainability of insurance companies and their clients, will persist (MoF DIS, 2003; Gurkina, 2004).

The insurance industry surge is associated with the growing demand for insurance services in such sectors as property and liability insurance, in addition to the traditionally

important for Russian life insurance. Environmental insurance in Russia is implemented primarily under mandatory liability insurance for high-risk facilities, voluntary environmental insurance liability is not widespread.

The majority of insurance products provide for the protection of objects – sources of environmental hazard, covered by the existing mandatory liability insurance legislation (hazardous facilities, carriers of hazardous waste, toxic substances and hazardous materials, and waterworks). This type of insurance covers accidental third-party life and health injury and property damage, as well as environmental (nature resource) damage. Most often accepted for insurance are risks of pollution of water bodies and other consequences of accidents at waterworks. The second most common type of insured risks is the risk of soil and ground contamination. Forest insurance against fire risk is currently being pilot tested in the North-Western Okrug (see. Section 5.3).

During the evaluation of the pre-insurance surveys, it was noted that the application of a formal environmental risks and damage assessment procedures to calculate insurance premiums in the practice of liability insurance of hazardous facilities is an exception rather than the rule (T-1, T-3, S-1, R-1, R-2, N-1).

It should be mentioned that the majority of insurance companies, dealing with civil liability insurance for hazardous facilities, are private companies, and their insurance reserves are considerably lower than those of the western companies specialising in this field. An opinion exists among experts that despite the legislative requirements, environmental risks related to these facilities are actually not being insured, since in cases of loss occurrence compensations are focused primarily on property damages of physical persons and legal entities, while damages to waters, soils and atmosphere are not covered due to the liability limits and insufficient amounts of insurance reserves.

In 2004, a trend emerged towards eliminating those insurers who are not able to provide an adequate protection of their clients interests from the market. Due to non-compliance with more stringent requirements on the volume of charter capital, about 250 (out of 1416 registered on January 1, 2004) insurance companies lost their insurance license, which is viewed by experts as a factor for increase in financial security of the insurance market (Gurkina, 2004). However, even the largest Russian insurance companies cannot alone insure environmental risks against the full volume of the expected damage. To tackle this problem establishment of insurance pools as well as co-insurance and re-insurance mechanisms are to assist. The re-insurance services

market in Russia is currently underdeveloped (Zhilkina, 2000), and establishment of specialised pools for insurance of environmental risks is still the task for the future¹⁶ (Kovalenko, 2005).

Among the major reasons for the insignificant development of voluntary environmental insurance the following were named: the lack of financial resources of the potential insureds (1), low number of claims from the affected parties (2), and limited insurance portfolio and inflexible rate policy of insurers (3). The recent trends in the economic and insurance industry development allow us to speak about the decreasing significance of the first and the third EI obstacles, while the importance of the second factor grows.

The number of court cases regarding environmental damage compensation reached 6000 in 2003. The total volume of natural resource and environmental damage compensation claims filed in 2003 reached approx. 3.1 bln. Roubles, the recovered means amount was 449.5 mln. Roubles (MNR, 2005d). The majority of claimants represented environmental supervision authorities suing industrial facilities for environmental damages as a result of violation of environmental law. The share claims against health injury and property damage resulting from abuse of the environmental law was insignificant.

Courts deal with environmental damage claims in case the cause-and-effect relation between the activities of the source of hazard and negative changes in the environment. This is possible in case the evidence of violation of both environmental quality and environmental impact standards by environmentally hazardous facility, has been recorded. It is difficult to prove the fact of exceeding environmental quality standards for some types of impacts (e.g. in case of accidental emissions), especially on sites with high concentration of sources of impacts. Besides, the weakened environmental control system in the country is unable to identify all such facts, especially when the exceedances of emission standards are marginal. Lack of procedure to authorize the environmental damage estimations (both predicted and actual) questions their validity as pieces of evidence in the court trial.

Meanwhile, court can sustain cases dealing with environmental damage in the absence of violation of the relevant standards (or registered facts of such violation) (Tchepurnyh *et al*, 1998). Moreover, not only compensation for material damage to the property, but also health injury and moral damage compensation, resulting from the violation of environmental law, can be obtained through the court. However, many potential claimers, particularly physical persons, do not attempt to file claims for damage caused by the activities of enterprises sources of adverse impacts on the environment. According to experts, this is related to the low level of awareness of

¹⁶ Currently only the Russian Nuclear Pool is operating in the country.

their abilities (low judicial literacy) and insufficient legislative basis for the procedure of damage compensation. In turn, low actional activity hampers the development of this branch of judicial practice, which is quite currently limited in Russia.

As a result, in case of damaging the environment enterprises, as a rule, escape with charges, rarer are forced to spend on environmental reclamation, but practically never compensate *in full* for the environmental damage and third-parties injuries (N-1, T-1, T-2, L-1, T-3). Such ‘impunity’ of hazard causers does not improve awareness of environmental problems of economic actors while its low level was also named among the reasons of the ‘unpopularity’ of environmental insurance among potential causers of environmental damage. Rare cases of voluntary environmental insurance by enterprises are mostly related to the activities of captive insurance companies functioning under large extractive (primarily oil) companies (e.g. CJSC Yukos-Garant, JSC LUKoil Insurance Company (currently JSC Kapital Strahovaniye)). Their founders aim not only at assuring their financial security, but also secondary considerations (e.g. reduction of the taxable basis through creating insurance reserves) (R-2, T-1). Unfortunately, many incentives, which stimulate enterprises to improve environmental performance and mitigate impacts associated with their activities issues (good image in the opinion of customers/clients, demonstration of social accountability to increase own competitiveness), are rarely of interest for the Russian manufacturers (T-1, R-1, T-3).

The majority of the respondents were convinced that voluntary environmental insurance, as a form of civil liability insurance against damages, would not be effective enough to ensure environmental safety of industrial facilities in the Russian Federation (T-1, T-2, T-3, S-1, R-2, N-1, L-1). An opinion exists among experts that the main contribution in environmental safety is being made through civil liability insurance of enterprises posing significant threat to the environment, although great significance is also attached to property insurance (of both production facilities and natural objects). It is worth mentioning that one of the experts was of the opinion that development of all the possible applications of insurance in environmental protection and management improves the awareness of the population and specialists of insurance companies, which is one of the preconditions for the further development of the environmental insurance system.

SWOT-analysis of the national EI system


The analysis of the state of the EI system’s determinants allowed for identification of the current strengths and weaknesses of the system, as well as opportunities and threats of its further development (see Table 5.4).


Table 5.4. Strengths, weaknesses, opportunities and threats of the Russian EI system

Strengths	Weaknesses
<ul style="list-style-type: none"> • Mandatory environmental impairment insurance is required for certain economic activities in the framework of civil liability insurance, • Legislation for voluntary environmental insurance is sufficient, • Modern methods to estimate parameters for environmental risk allocation are developed, • High aggregated institutional capacity of the insurers in the EI field, • Established EI policy community with intensive networking among its members, • There is an experience with EI practical application in the framework of regional pilot projects 	<ul style="list-style-type: none"> • Controversial definitions of EI in in of the existing legislation, • Not all environmental risks are covered by provisions for mandatory EI, • Procedures to estimate predicted and actual environmental damage covered by insurance policies are not clearly defined, • Lack of integrated, formally approved, methodology to assess environmental risks and economic damages, • Weakened national environmental management system, which lacks resources and technical expertise in the field of EI, • Lack of co-operation among state agencies interested in EI (MNR, MEM, MoH, and Rostehnadzor), • Low aggregated institutional capacity of the potential insureds in the EI field, • Lack of special EI knowledge among most of EI stakeholders, • Low number of claims ion environmental damage from affected parties compared to the number of damage cases, • Low amounts of insurance reserves and environmental protection measured reserves
Opportunities	Threats
<ul style="list-style-type: none"> • High deterioration of the basic production assets, high number or industrial accidents • Poor environmental conditions, • Economic upturn in all sectors, increase in environmental investments, • Dramatic increase in the national insurance market, • Expanding scope of the EI notion • Possible joining WTO by Russia, • Trend towards harmonization of the EU and the Russian legislation, • Development of EI legislation at the CIS level (model laws), • Introduction of mandatory EI in CIS countries (e.g. Azerbaijan) 	<ul style="list-style-type: none"> • Relatively low priority of environmental protection issues for the Russian society, • Focus on economic objectives among decision-makers, • Lobby against, and open opposition to, EI among decision-makers, • Negative EI image among potential insureds (EI perceived as an 'exaction' laid on manufacturers), • Tax policy that does not provide enough incentives for insurers and insureds to deal with the new insurance branch, • Traditionally narrow EI definition (a type of liability insurance) among EI practitioners, • Trend towards captive EI practice, • Increasing inflation rates, • Continuous administrative reform, • Restricting possibilities to implement regional initiatives due to the strengthening power hierarchy, • Underdeveloped national re-insurance market • Distribution of powers among regional and federal authorities in the EI field are not clearly defined


Notes:


EI – environmental insurance

 EI system context-related factors

 EI institutional system-related factors

 EI legislation-related factors

 EI practice-related factors

 EI methodology-related factors

5.5. Current state of the national EI system and opportunities for its improvement: conclusions

The Russian environmental insurance system is currently under development. If the 1990s were the time of active promoting the idea of applying insurance in the field of environmental protection and management, the recent years have seen some decline in the interest of the environmental protection agencies towards this issue.

Context influences the EI system in different ways. Thus, unfavourable environmental conditions and insufficient financing of environmental preventive and remediation measures are considered as factors encouraging the development of environmental protection and management insurance industry. Resulting from economic upturn increase of the volume of available resources in the country creates the necessary economic conditions for this. Quite low level of environmental consciousness of the society, both among the public at large and state officials, creates obstacles for the EI development. Political and institutional element of the context is heterogeneous: on one hand, the administrative reform weakening the system of environmental management, stringent taxation policy, and the priority of economic objectives before environmental ones negatively affect public policy-making on insurance for environmental protection and management. On the other hand, there are external and internal political factors which could encourage introducing insurance into environmental protection and management.

Legal and regulatory framework for environmental insurance is among the weakest elements of the current EI system. Development of relevant legislation has concentrated mainly on liability insurance, which narrowed the area of EI application. The existing EI legislation suffers from a significant number of gaps and contradictions. Moreover, many blame the mechanism of control over the implementation of the existing standards.

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 regulatory basis and developing common approach to environmental risk and economic damage assessment. to foster their practical application.

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.

The most important issue for further development of the environmental insurance system is the issue of sufficiency/insufficiency of incentives for the potential insureds to apply for insurance coverage. The majority of the expert respondents believe that the main incentive for the development of any type of insurance in Russia is its mandatory nature stated by the legislation. However, even if this mandatory EI is introduced in Russia in the nearest future (even though political context is not favourable for this development), such mechanism would not function in practice in the absence of the necessary social and economic prerequisites. Therefore it seems reasonable to concentrate on other means to influence the behaviour of the causers of environmental damage.

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.