Gennady M. Fedorov

THE NORTH-WEST OF RUSSIA: THE POTENTIAL AND AREAS OF RUSSIAN-LITHUANIAN RESEARCH AND INNOVATION COOPERATION

٢

This article considers the present state and prospects of Russian-Lithuanian cooperation in the field of research and innovation. The author analyses the tendencies of innovation activities of economic entities in the North-West of Russia in terms of relative innovation activity indicators. Special attention is paid to the role of cross-border and trans-border cooperation in the Baltic macroregion as a mechanism of managing the innovative development of regional economy.

Key words: Baltic macroregion, Lithuania, Russian Federation, cooperation, research potential, innovative development.

The North-West Federal District of Russia (North-West), especially St. Petersburg, has a great research and innovation potential and highly qualified researchers and developers. The innovation products that are produced in Russia, including the North-West, have to be sold not only at the national, but also at the international markets. International experience in innovation can be used to foster the establishment of a functioning national innovation system in Russia. Finally, some issues of the innovation development can be solved by joint efforts in the course of the implementation of the international projects involving Russian and international partners. All these aspects are crucial to the modernization of Russia and its transition from the raw materials oriented economy to the innovation development based economy.

According to the experts of the Saint Petersburg Scientific Center of the Russian Academy of Sciences (SPbRC RAS), five entities of the North-West (St. Petersburg, the Republic of Komi, the Leningrad region, the Vologda region and the Kaliningrad region) were among 20 Russian region where in 2005 the complex competitive potential was at the highest level. Moreover, all of them (except the Republic of Komi) are among the leaders in innovation development [12. 94].

The North-West Federal District of Russia has a relatively high level of innovation potential but lower than the average national level of the introduction of innovation technologies in the country's economy. Thus, the North-West federal district has 9.5% of the Russia's population, produces 9.9% of the GDP, and 12.0% of the processing industry of the country. But the percentage of the personnel occupied in research and development is higher than the above mentioned indicators and accounts for 13.1% of the total number in the Russian Federation. The expenditures on research and development in abthe North-West are also higher — 13.6%. In 2008, 13.5% of advanced technologies were developed in this federal district. The percentage of enterprises in the North-West district introducing technological innovation is 10.6% and the percentage of expenditures on the technological innovation accounts for 9.6%, which is close to the abovementioned population indicator. However, the percentage of patents issued in the North-West is slightly lower, accounting for 8.5%; finally, only 8.1%

of the total volume of innovative products and services is produced in this federal district [10].

A positive tendency in the growth of innovation in the economic entities of the North-West, as well as in Russia on the whole, began to manifest itself in the second half of the first decade of the XXI century. The number of advanced manufacturing technologies created in the federal district has grown one and a half times from 103 in 2005 to 158 in 2009, and increased 23.8% from 10,901 units in 2006 to 12,494 units in 2008. In 2007—2008 the volume of innovative products and services in the North-West has increased 12% (from 79.6 billion rubles in 2007 to 89.1 billion rubles in 2008). However, a number of indicators in the North-West federal district is lower than the average indicators in Russia, particularly those reflecting the implementation of the innovation technologies. Thus, the expenditures on innovation technology in Russia in 2000—2008 increased almost 5 times, but in the North-West — 4 times. The volume of innovative products and services in Russia during this period increased 7.1 times, but in the North-West [10].

St. Petersburg has the highest innovation activity indicator in the North-West federal district; the total level of innovations in the industrial enterprises in this city is 15.3% against 10.0% in the North-West and 10.7% in Russia. Other innovation activity indicators of St. Petersburg are also higher than in other entities of the North-West due to the fact that the main potential of R&D organizations is concentrated there. Saint Petersburg differs from other groups of North-West economic entities in terms of some absolute and relative innovation activity indicators (see Table 1, 2). It comes second only after the Republic of Karelia, the Murmansk and Novgorod regions in terms of the innovation expenditure per capita. The lowest indicators in the North-West belong to the Pskov region and (with the exception of the personnel occupied in research and development per one thousand inhabitants) to the Nenets Autonomous District.

Ranking of the North-West	entities according to absolute innovation activity
	indicators, 2008

Group	The entity of the North-West federal district	The number of personnel occupied in R&D (people)	Expenditure on technology innovation (million rubles).	Number of patents issued
1	St. Petersburg	81,654	11,877	2,053
2	The Murmansk region	2,071	4,411	69
3	The Vologda, Leningrad, Novgorod	4836,374	2,050-3,250	16—126
	regions, the Republic of Karelia			
4	The Arkhangelsk and the Kaliningrad	1,897-2,971	772—1474	45—92
	regions, the Republic of Komi			
5	The Pskov region	230	233	56
6	The Nenets Autonomous District	43	0,1	-

Group	The entity of the North- west federal district	The number of personnel occupied in R&D (people per 1 thousand inhabitants)	Expenditure on technology innovation (rubles per capita).	Number of patents issued (patents per 10 thousand inhabitants)
1	St. Petersburg	17,8	2592	4,5
2	The Leningrad region	3.9	1283	0.8
2	The Republic of Karelia, the Murmansk region	1.4-2.4	4,570—	0.2-0.8
			5,210	
3	The Vologodsk and the Novgorod regions	0.4-1.3	2,166—	0.6-0.7
			3,245	
4	The Arkhangelsk and the Kaliningrad regions,	0.3-2.3	783-1,163	0.5-0.9
	the Republic of Komi			
5	The Pskov region	0.3	332	0.8
6	The Nenets Autonomous District	1.0	2,4	

Ranking of the North-West entities according to relative innovation activity indicators, 2008

The relatively high growth rates of the innovation economy in Russia and in the North-West federal district which are typical of the second half of the first decade of the XXI century are still insufficient for its transition to the innovation way of development, because the number of innovation-based enterprises is low. Innovation technologies comprise a small share both of the total volume of products and services produced in Russia and of the exported products and services. Although the North-West federal district has a great research and innovation potential, highly qualified research and development personnel, the existing opportunities are still not fully used.

In order to increase the innovation capacity of the district, in November 2008 the Interagency Coordinating Council of RAS in Fundamental and Applied Research adopted a development strategy for the triangle "Research — Education — Innovation" of the North-West Federal District of Russia until 2030. The strategy set a number of new long-term priorities and directions for development in the fields of research, education and innovation in the North-West [5. p 4].

The Strategy has become the basis for the elaboration of the *Integrated Scientific and Technological Programme of the North-West Federal District until 2030*, which was discussed at the meeting of the Interagency Coordinating Council of the RAS in Fundamental and Applied Research (St. Petersburg, February 16, 2011). This complex programme proposes measures (including for the entire Russian Federation) in the following fields [3, p. 14—18]

• priority fields of the innovative economic development, determined in 2009 by President Dmitry Medvedev:

— energy efficiency and energy saving;

٩

— nuclear technologies;

- space technologies related to telecommunications;

- medical technologies - diagnostic equipment and medicines;

- strategic information technologies;

• additional fields of crucial importance for the North-West federal district:

- development of shipbuilding,

- creation and introduction of new materials, including nanomaterials;

— development and introduction of new technologies in the priority fields of the North -west (biotechnology, etc.)

- environmental security of the macroregion;

- human and society studies;

- development and implementation of new technologies in agriculture.

The experts of the Institute of the Regional Economy of RAS (St. Petersburg) who developed the Strategy and Programme for Innovative Development of the North-West emphasized "the role of cross-border and trans-border cooperation as a mechanism of the innovation development of the regional economy in the globalized world" [5, p.189]. Such cooperation has a great potential for the Baltic macroregion which includes the whole territory of nine countries, or parts of them, including a number of entities of the North-West Federal District of Russia.

Eight EU member states of the Baltic Sea Region are already following the jointly elaborated EU programme on the macroregional strategic planning entitled "The European Union Strategy for the Baltic Sea region." One of its important lines is the section titled "The growth of economic prosperity in the region" including "The implementation of the region's capacity in research and innovation" [17, p. 226]. Although the strategy was developed as an internal EU strategy and focused on the EU and the EU member states, we agree with the opinion that "the already existing and well functioning structures, such as the Northern Dimension, may enhance further cooperation with the countries that are not the EU member states" [17, p. 225]. There are some other important tools for multilateral cooperation, as the Council of the Baltic Sea States, the Organization for the Baltic Sea States Subregional cooperation, the Interreg programme (through the national sub-committee), Cross-Border Cooperation (CBC) within the European Neighbourhood and Partnership Instrument (ENPI) for 2007-2013. One should also mention the positive role of bilateral agreements in cooperation between Russian regions and regions of other countries.

Special attention should be given to cooperation between the entities of the North-West federal district and regions countries of other countries, that have already developed their innovation strategies, such as the "Innovation Strategy of the Helsinki metropolitan area", which includes coordination of several administrative-territorial units [17, p. 241–247].

Thus, a deeper international cooperation may become one of the driving forces for the growth of innovation activity in the North-West of Russia. For this reason the main forms and fields of cooperation in the Baltic Sea region are actively studied in the Immanuel Kant Baltic Federal University [2, 4, 6, 7, 11, 13—16, 19].

.)

The implementation of the international project East West Window in 2007–2008 and the Baltic Sea Region INTERREG III B Neighbourhood Programme, aimed at accelerating the development of the region through a more efficient use of the existing growth potential, has yielded a number of results raising innovation capacity of the North-West federal district in comparison to other countries of the Baltic macroregion and strengthened its prospects of international innovation cooperation in the Baltic region [6]. Russia was represented by the administration of St. Petersburg, the Immanuel Kant State University of Russia (Kaliningrad) and the Association Specialists in Economic Development of Territories (ASSET) of (St. Petersburg). The EU party was represented by the Ministry of Regional Development and Local Government of Latvia (project management), the Federal Ministry of Transport, Building and Urban Development of Germany, the Ministry of Enterprise, Energy and Communications of Sweden, the Ministry of Regional Development of Poland, the Danish Forest and Nature Agency, the Swedish Research Institute "NORDREGIO" and the Maritime Institute in Gdansk. The key point of the study was competitiveness and innovation.

The project found that, firstly, the Russian industry lags far behind international standards, including in the sphere of innovation activity. Secondly, the activity of Russian enterprises is based on raw materials as well as on easily accessible, large and protected by Russian laws domestic market; this reduces the interest of enterprises in entering the international markets with their high level of competition.

A more detailed analysis revealed only a few examples of emerging international clusters with the participation of Russia in the Baltic Sea region. The most important of them is the information and telecommunications technology cluster founded within the framework of cooperation between Finland, Estonia and Russia. One more cluster is emerging in St. Petersburg in the field of car assembly due to the presence of several international manufacturers there. However, it is unclear whether this will form strong subcontract networks and capacities.

Neither Russia, nor Lithuania considers each other as partners for cooperation in research, technology and innovation. By the end of 2010 we carried out a research entitled "Comparative analysis and development forecast for innovation centers and technology clusters in the North-West of Russia, the Baltic and Nordic countries. Stage 1. Analysis and forecast of trends in the national innovation system of Lithuania and the prospects for cooperation between the North-West of Russia and Lithuania in the field of research and technology development". The results of this research showed that cooperation between Russia and Lithuania in several areas could bring significant benefits to both countries; both countries had a common system of education and research, common economy and social sphere just 20 years ago. There are still some common traditions, and the Russian language in many cases can be used as a language of communication between scientists from Russia and Lithuania.

Currently, the research potential of Lithuania, not only in absolute, but also in relative (per one thousand people) indicators, is below to the Russian one. However, the gap in relative indicators is shrinking rapidly (Table 3).

Entitity	2000	2005	2006	2007	2008	2009
The number of personnel occupied in R&D per one thousand inhabitants						
Lithuania	4.2	4.8	4.8	5.5	5.5	5.5
North-West	8.2	7.6	7.6	7.7	74	
R&D costs (% of GDP)						
Lithuania	0.59	0.75	0.79	0.81	0.80	0.84
North-West	1.86	1.72	1.73	1.72	1.72	

Relative indicators of research development in the North-West Federal District of Russia and Lithuania

The main research centers of Lithuania are created on the basis of higher education institutions. In addition to this, an innovation infrastructure for the development of critical technologies is being formed on the basis of five complex research, education and business centers (valleys). Lithuania has highly-developed technologies (biotechnology, laser technology, pharmaceutical drugs and equipment, etc.), qualified labor force and a developed cluster consisting of research and development centers and technological parks.

The rankings of the leading universities of Lithuania and the North-West Russia (the volume of research is increasing in higher education institutions, especially in Lithuania) are presented in Table 4. Moreover, with the help of the EU structural funds there have already been created more than ten research and technology parks in Lithuania, the main objective of which is to carry out research in the most promising fields.

The ranking of the leading higher educa	tion institutions of Lithuania
and the North-West	of Russia

Ranking	Higher education institution	
U	5	
884	Vilnius University	
982	Vilnius Gediminas Technical University	
1058	Saint Petersburg State University	
1348	Vytautas Magnus University	
1492	National Research University of Information Technologies, Mechanics	
	and Optics in St. Petersburg	
1950	Šiauliai University	
1968	Klaipeda University	
2215	St. Petersburg State Polytechnical University	
2235	Herzen State Pedagogical University of Russia	
2358	Kaunas Medical University	
2594	Murmansk State Technical University	
2613	Lithuanian Agricultural University	
2863	Lithuanian University of Educational Sciences	
2935	Petrozavodsk State Technical University	
2973	Mykolas Romeris University	
Shanghai Ranking — Saint Petersburg State University only (301—400 position)		
Times Higher Education — Vilnius University only (500—550 position)		

،

There are agreements on cooperation between the higher education institutions of the North-West of Russia and Lithuania (Table 5), but their number is small, and they are focused on primarily educational issues (students and teaching staff exchange). The most active representatives of Russia are higher education institutions of St. Petersburg and Kaliningrad. The scientific relations consist basically of participation in conferences and seminars, publishing articles in scientific journals of partnership universities, although there are some examples of the implementation of joint research that are most often carried out in the framework of cross-border cooperation and focused on the development of new types of equipment or technology.

The higher education institution of	Russian partners
Lithuania	
Vilnius University	Immanuel Kant Baltic Federal University (Kalinin-
	grad), Kaliningrad State Technical University, Saint
	Petersburg State University
Vilnius Gediminas Technical	Saint Petersburg State University of Architecture and
University	Civil Engineering, St. Petersburg State Polytechnical
	University, Kaliningrad State Technical University
Lithuanian University of	Immanuel Kant Baltic Federal University (Kalinin-
Educational Sciences	grad)
Lithuanian Academy of Music and	Rimsky-Korsakov Saint Petersburg State Conserva-
Theatre	tory
Klaipeda University	Immanuel Kant Baltic Federal University
	(Kaliningrad), Baltic State Academy of Fshing Fleet
	(Kaliningrad), Zoological Institute of the Russian
	Academy of Sciences (St. Petersburg), Russian State
	Hydrometeorological University (St. Petersburg)
Šiauliai University	Saint Petersburg State University, Pskov State
	Pedagogical University

Agreements on cooperation between higher education institutions of the North-West of Russia and Lithuania

The economy of Lithuania has a number of highly developed technologies such as biotechnology, laser technology, pharmaceutical drugs and technologies, etc. The labor force is highly qualified. A cluster of research centers and research and technology parks is being created in the country.

The main fields that are of great interest for research and technology cooperation between Lithuania and Russia are the following ones:

1. The energy sector. Exchange of experience in nuclear power generation, energy efficiency and energy saving, modernization of power grids and optimization of electricity networks (including the Baltic Electricity Grid that is under construction now).

2. Cooperation between Lithuanian and Russian enterprises in the field of technology modernization and the development of innovative products in: 1) power engineering, 2) petrochemical industry, 3) biotechnology and microbiology, 4) laser technology and 5) optical equipment. Technology modernization in the mentioned sectors of the economy should be aimed at achieving a global level and consider the peculiarities, needs and the main directions of development of the Lithuanian economy. In power engineering that will yield into innovation in manufacturing of equipment for power stations. In the petrochemical industry — the modernization and development of new equipment. In the chemical industry — the development of new types of fertilizers, especially organic granulated fertilizer pellets, the development of microbiology.

3. Cooperation in solving the problems of the coastal area of the Baltic Sea region and in environmental management, in the development of transportation. Russia is also interested in cooperation in this field because of the exclave Kaliningrad region. Both Lithuania and the Kaliningrad region use the water resources of the Neman river and the Baltic Sea; Lithuania provides a transportation corridor from the mainland of Russia (through the Republic of Belarus). At the same time, participation in transborder cooperation of Russia and the states of the Baltic region and Northern Europe is of great economic and political interest for Lithuania.

A promising manufacturing and technology export network can be established in the following fields: information technology and electronics; manufacturing technologies, new materials and chemical products, living systems technologies, transportation, fuel and energy sector, ecology and environmental management.

The implementation of mid-term and long-term innovation projects in various fields on the basis of the existing research and educational centers of Lithuania and entities of the North-West federal district seems to be promising as well. A number of priorities for cooperation in the fields of research and technology were determined in the course of research carried out by the Immanuel Kant Baltic Federal University. Most of them refer to the processing industry. First of all, it is the development of new and emerging technologies. such as nanotechnology, biotechnology. microbiology, space technology, technologies of nuclear energy and nuclear physics, energy-saving technologies, as well as equipment-engineering technologies (including laser and radar-engineering), and under certain conditions — technologies of the defense sector. Not only the mentioned above, but also such traditional technologies as manufacturing technologies used in engineering, technologies and equipment for mechanical and physico-technical processing, new construction materials, lumbering technologies, and possibly new technologies to upgrade other branches of industry are considered to be very promising.

Other sectors of economy may benefit from international cooperation new technologies in agriculture, in navigation, commercial fishery, fleet maintenance, new technologies in medicine and medical equipment engineering; technologies in information and telecommunication, intelligence systems. The evaluation of mineral resources supplies, mining and minerals processing, environmental protection and management in the Baltic Sea region are of topics of mutual interest. The above-mentioned fields correspond to the priorities of research and technology development in the Russian Federation. Given the gradually improving relations between the two countries, we can predict that the process of cooperation in the field of technology and innovation is to be intensified in the future.

The existing research and education centers of Lithuania and entities of the North-West may form a good basis for future implementation of midterm and long-term innovation projects in the fields of shipbuilding, creation and implementation of new materials, including nanomaterials, developing and implementation of new technologies, environmental security of the Baltic Sea region, and introduction of new technologies in agriculture.

In order to strengthen cooperation in the field of technology development and innovations between Russia and other countries, including Lithuania, it is necessary to ensure the establishment of innovation infrastructure and to enhance technology transfer. The foundation and development of innovation and technology center can become an effective tool for efficient interaction between universities, research institutions and enterprises, providing a more efficient transfer of information and technology. A model of cooperation between Russian innovation centers and member enterprises of the new European network of Business Support — Enterprise Europe Network (EEN) is worked out on the basis of the pilot centers.

The Immanuel Kant Baltic Federal University has elaborated a draft agreement between the Government of the Russian Federation and the Republic of Lithuania on cooperation in research and technology, which could be used as an effective mechanism for interstate regulation of cooperation in research and technology.

Taking into account the existing experience of Russia-Lithuania cooperation, the most promising centers for such cooperation could be St. Petersburg with its great research and innovation potential and Kaliningrad, a cross-border neighbour of Lithuania. The Immanuel Kant Baltic Federal University has already taken several steps to deepen this cooperation.

The programme "Baltic Sea Region" and cross-border cooperation programme "Lithuania — Poland — Kaliningrad region" within the European Neighbourhood and Partnership Instrument (ENPI) provide excellent opportunities for enhancing cooperation between Lithuania and Russia. The latter's interest in the neighborhood projects set by the EU is based on increasing co-financing. Thus, the CBC program "Lithuania — Poland — Kaliningrad" receives funding from the European Union in the amount of 132 million euros, and initially Russia was supposed to allocate only 10%. However, Russia has allocated 44 million euros (i.e. 30%) for this purpose. The total amount of money allocated in the framework of five programs will account for 437 million euros, including 103.7 million euros, allocated by Russia [9].

However, the decision on Russia's participation in the programs of the ENPI, including program "Lithuania — Poland — Russia 2007—2013" was delayed. The final agreement on the conditions for ENPI program co-financing, (Russia's increased participation in the financing) and a corresponding increase in Russia's role in the selection of projects, was adopted only at the end of 2009. A set of projects included into the six programs of the ENPI began to emerge in the spring of 2010 and its final approval can be expected by the middle of 2011. Russia will have an opportunity to take part in six programs:

Ì

— Kolarctic (Northern Finland, Sweden, Norway) / Russia (the Murmansk, Arkhangelsk regions, the Nenets Autonomous District) — financing granted by the EU in 2007—2013 is 28.241 million euros;

— Finland / Russia (the Republic of Karelia) — 23.203 million euros;

— South-Eastern Finland / Russia (St. Petersburg, the Leningrad Region) — 36.185 million euros;

— Estonia / Latvia / Russia (the Leningrad and Pskov regions, Saint-Petersburg) — 47.775 million euros;

- Lithuania / Poland / Russia (Kaliningrad) - 132.130 million euro.

In a complex program "Baltic Sea Region" the Russian partners (the Republic of Karelia, St. Petersburg, the Murmansk, Leningrad, Pskov, Novgorod, Kaliningrad and Arkhangelsk regions, the Nenets Autonomous District) may only participate as associated members, since Russia has not provided its co-financing by the launch of the program [1].

The amount of money allocated by the European Commission within the CBC programme "Poland — Lithuania — Russia: 2007—2013" will account for 132 million euros. Forty-four million euros is supposed to be allocated from the federal budget of the Russian Federation, while additional 10% of the budget of the project will be co-financed by the immediate participants the programme.

In comparison to the previous ENPI programme the region has significantly expanded (Fig.).



Fig. Territories involved in the ENPI programme

٢

It now includes two areas: the one located directly near the border — the core area and the one neighbouring to it, but located at some distance from the border — the adjacent area. The previous programme involved only those bodies (authorities, institutions of research, education and culture, NGOs) which were located in the core area of today. Nowadays entities, located in the adjacent area, are unable to initiate projects, but they have an opportunity to participate in the projects as additional partners in case there are participants from the core area from this country.

The priorities of the new programme are quite general [8]:

1) contribution to the solution of common problems;

2) implementation of social, economic and territorial development;

3) "horizontal" priority associated with enhancing cooperation between people.

In order to make these priorities more specific, the following measures were proposed:

For Priority 1:

— sustainable use of the environment;

- improved accessibility;

For Priority 2:

— the development of tourism;

— human potential development by means of improving social conditions, management and education opportunities;

— increasing competitiveness of small and medium enterprises and facilitating labor market development;

- joint efforts in territorial and socio-economic planning.

As you can see from the list of priorities, innovation economy technologies are not on the agenda yet. In addition, the main innovation centers of Lithuania — Vilnius and Kaunas — are not in the core, but in the adjacent area of the programme. That is, they can only be additional partners, and they may not be initiators of projects.

Numerous relations. emerging and developing during the implementation of international projects, are mainly related to cooperation in the social sector (education, health, culture; public, particularly youth organizations; immigration policy), environmental protection. the development of a common transportation infrastructure and tourism infrastructure, expanding network in the field of research. They also help indirectly to develop economic relations - cross-border trading and international tourism, create favourable environment for joint ventures and for the cooperation of economic entities of the neighboring countries in the production of commodities. We believe that innovation can and should become a top priority in the ENPI programmes.

Despite the progress in the elaboration of joint programmes made by year 2010, nowadays, the prospects of further development of cross-border cooperation are not specified enough. This is a consequence of the lack of a clear and agreed joint strategy for trans-border cooperation between the European Union and the Russian Federation at the level of entities. Special attention should be paid to innovation development during the elaboration of such a strategy.

The foundation of the Immanuel Kant Federal State University on the basis of the Immanuel Kant State University of Russia plays an important role in intensifying cooperation between Russia and Lithuania due to the fact that the university has strong relations with several universities of Lithuania (especially with Klaipeda University). In 2007, in the framework of CBC programme "Lithuania — Poland — Kaliningrad region of Russia" (preceding the current ENPI program), a project for the "Establishment of a bipolar research area Klaipeda — Kaliningrad" was carried out. The partners of the Immanuel Kant State University of Russia were Klaipeda University and the Governor's Administration of the Klaipeda County of Lithuania.

The project was aimed at the creation of infrastructure for long-term development of research and innovation potential of Klaipėda County of Lithuania and the Kaliningrad region through providing support to young scientists and strengthening trans-border research cooperation and networking. An analysis of research education in Klaipeda University and the Immanuel Kant State University of Russia was made, a joint strategy for development of scientific education in both universities and an action plan aimed at supporting young scientists were elaborated. The development strategy for trans-border cooperation between the Klaipeda County of Lithuania and the Kaliningrad Region in the field of economy, research and technology was developed. Summer schools for young scientists from both universities were held and an international team of young researchers under the joint supervision was organized. Two centers of trans-border research were set up in both universities with a view to organize a joint center in the future.

Unfortunately, the project database located on a specially designed website created in the framework is no longer updated. The attempts to organize a long-term joint research group have not been successful, except for certain projects in tourism and environment, as well as in the history of the South-Eastern Baltic. Meanwhile, both parties could benefit from the development of this joint research. What could be especially useful for innovation research is the establishment of relations between the Innovation Park of the Immanuel Kant State University of Russia, created during the implementation of the National Project "Education", and the Technology Park of the Klaipeda University.

Hopefully, the work carried out in 2007 will be continued if the draft project to create a tripolar research area Kaliningrad — Gdansk — Klaipeda prepared in 2010 within the framework of CBC programme "Lithuania — Poland — Russia" will get support. The project partners are the Immanuel Kant Federal State University, Gdansk and Klaipeda Universities, the Ministry of Economy of the Kaliningrad region. One of the main objectives of the project is to develop greater interaction between universities in the field of the regional innovation development and trans-border cooperation in order to address common problems.

Thus, the above mentioned example of research potential in cooperation between Russia and Lithuania in the field of science and innovation shows that there are significant opportunities to expand and deepen such cooperation. Meanwhile, the existing capacity is poorly used. A more active

٨

participation of Russia in the projects initiated by the EU, as well as granting Russian higher education institutions taking part in international projects additional funds could contribute to the development of joint research and innovations. This would create a better opportunity to take into account Russia's interests in establishing relationships with partners from other countries.

References

1. *Instrument* Evropejskogo sosedstva i partnerstva. Prigranichnoe sotrudnichestvo. Strategija na 2007—2013 gg. [online] Available at: http://ec.europa.eu/world/enp/pdf/enp_cross-border_cooperation_strategy_paper_ru. pdf> (Accessed 22 Juny 2010).

2. Klemeshev, A. P., Fedorov, G. M. 2009. Baltijskij region, № 1, pp. 96-103.

3. *Kompleksnaja* nauchno-tehnicheskaja programma Severo-Zapadnogo federal'nogo okruga Rossii do 2030 goda (proekt dlja obsuzhdenija) by V. V. Okrepilov — nauch. rukovoditel' Programmy. 2010. SPb, IPRJe RAN.

4. Korneevets, V. S. 2010. Mezhdunarodnaja regionalizacija na Baltike. SPb.: Izd-vo S.-Peterburg. gos. un-ta.

5. *Okrepilov, V. V.* (Ed.). 2010. Metodologicheskie osnovy razrabotki i realizacii Kompleksnoj nauch-no-tehnicheskoj programmy Severo-Zapada Rossii do 2030 goda. SPb, Nauka.

6. Oding, N. Ju., Fedorov, G. M. 2009. Vestnik Rossijskogo gosudarstvennogo universiteta im. I. Kanta, №3, pp. 63–69.

7. Oding, N. Ju., Fedorov, G. M. 2009. Issledovanija Baltijskogo regiona, № 1, pp. 19–27.

8. *Predstavitel'stvo* Evropejskogo sojuza v Rossii. [online] Available at: <http://www. delrus. ec. europa. eu/ru/p_746.htm> (Accessed 4 May 2010).

9. *Prigranichnoe* sotrudnichestvo v ramkah Evropejskogo instrumenta sosedstva i partnerstva. Predstaviteľstvo Evropejskogo sojuza v Rossii. [online] Available at: <<u>http://ec. europa. eu/delegations/russia/eu_russia/tech_financial_cooperation/cbc_</u>enpi/ index ru. htm> (Accessed 16 Oktober 2010).

10. *Regiony* Rossii. Social'no-jekonomicheskie pokazateli. 2009: statisticheskij sbornik. 2008. Moscow, Rosstat, pp. 815–819.

11. Zauha, Ja., Limonov, L. Je. (and all). 2008. Severo-Zapad Rossii v regione Baltijskogo morja: problemy i perspektivy jekonomicheskogo vzaimodejstvija i sotrudnichestva. Kaliningrad, Izd-vo RGU im. I. Kanta.

12. Okrepilov, V. V. (Ed.). 2009. Strategicheskie prioritety regional'nogo razvitija: ot teorii k principam formirovanija edinogo social'no-jekonomicheskogo prostranstva. SPb, Nauka.

13. Fedorov, G. M., Zverev, Ju. M. 2009. Vestnik Voronezhskogo gosudarstvennogo universiteta, №2. Ser. Geografija, Geojekologija, pp. 97—100.

14. Fedorov, G. M., Zverev, Ju. M., Korneevets, V. S. Rossija na Baltike: 1990–2007 gody. 2008. Kaliningrad, Izd-vo RGU im. I. Kanta.

15. *Fedorov, G. M.* 2010. Rol' Kaliningradskoj oblasti v rossijsko-evropejskoj jekonomicheskoj kooperacii na Baltike / Geographische Tätigketsfelder — von der Feldforschung bis zur Planungspraxis. Leipzig: Leibniz-Institut für Länderkunde, pp. 37—54.

16. *Fedorov, G. M.* 2009.Vozmozhnosti sotrudnichestva vuzov Kaliningradskoj oblasti, Litvy i Pol'shi po voprosam obosnovanija i razrabotki sovmestnoj sistemy monitoringa social'no-jekonomicheskogo razvitija v ramkah evroregiona «Baltika» // Obwie aktual'nye voprosy prostranstvennogo planirova-nija i razvitija evroregiona «Baltika». Gdan'sk: Associacija Gmin RP Evroregiona «Baltika», pp. 6—17.

17. Okrepilov, V. V. (Ed.). 2010. Fundamental'nye problemy prostranstvennogo razvitija makroregiona pri perehode k innovacionnoj jekonomike. Na primere Severo-Zapada Rossii. Saint Petersburg, Nauka.18. *Academic* Ranking of World Universities — 2010. [online] Available at: http://www.arwu.org/ARWU2010.jsp (Accessed 20 November 2010).

19. Fedorov, G., Korneyevets, V. 2009. Economic Styles in the Process of the EU Eastern Enlargement. Schriftenreihe des EUROPA-KOLLEGS HAMBURG zur Integrationsforschung, № 58, pp. 325—337.

20. *KAUNAS* UNIVERSITY OF TECHNOLOGY. [online] Available at: <http://en. ktu. lt> (Accessed 20 November 2010).

21. *Klaipėdos* Universitetas. [online] Available at: <http://www. ku. lt> (Accessed 20 November 2010).

22. *Lietuvos* Muzikos ir teatro akademija. [online] Available at: (Accessed 20 November 2010">http://lmta.lt>

23. *Ranking* Web Universities by country (July 10). [online] Available at: <http://www.webo metrics.info> (Accessed 20 November 2010).

24. *Šiaulių* universiteto. [online] Available at: http://www.su. It> (Accessed 20 November 2010).

25. *Statistic* Lithuania. [online] Available at: <http://www.stat.gov.lt> (Accessed 20 November 2010).

26. *Vilniaus* pedagoginis universitetas. [online] Available at: http://www.vp. It> (Accessed 20 November 2010).27. *Vilnius* Gediminas Technical University. [online] Available at: www.vgu. It/english> (Accessed 20 November 2010).

28. *Vilnius* University. [online] Available at: <http://www.vu. lt/en> (Accessed 20 November 2010).

About author

Prof. Gennady Fedorov, Vice-Rector for Academic Activity, head of the Department of Social and Economic Geography and Geopolitics, Immanuel Kant Baltic Federal University.

E-mail: gfedorov@kantiana. ru