

## The Analysis of Institutional Environment for Development of a Public-private Partnership in the Sphere of Environmental Protection in the Samara Region

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### ABSTRACT

The relevance of researched problem is caused by the fact that public-private partnership has high potential to become an effective platform not only for infrastructure and socially important projects, but also to start mechanisms of environmental problems solution and activation of ecological business responsibility at the levels which are significant for the Samara region. The aim of the article is to consider the institutional environment of the Samara region from the point of view of readiness to implement public-private partnership in the sphere of environmental protection. The leading method to research this problem is analysis and synthesis that allow revealing essential aspects of the institutional environment in the region to implement projects of public-private partnership in the sphere of environmental protection. Results: there were revealed the factors, constraining development of public-private partnership in the sphere of environment in the Samara region, conditions of forming the environment are determined. Results of this research can be useful for specialists in the sphere of PPP both in executive, and in industry authorities.

### KEYWORDS

Public-private partnership, ecological damage, environmental protection

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### Introduction

Modern functioning of market system updates cooperation issues of state and business. Public-private partnership has high potential to become an effective platform not only for socially important projects, but also to start mechanisms of solving environmental problems and activation of ecological

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business responsibility on a municipality level that is significant for an entity. Such partnership becomes the engine of social ecological - economic changes.

At the moment high paternalistic expectations of subjects regarding the problem resolution with a cumulative ecological damage and impact on surrounding environments are characteristic of the Russian economy (responsibility principle of public authorities of the Russian Federation, entities of the Russian Federation, local government bodies to provide favorable environment and ecological safety in corresponding territories, obligation principle of participation of specified bodies in the activities for environmental protection) that in general it means the state has regulatory functions in this sphere. The motivating policy of ecological business responsibility was not created, there is high uncertainty degree in responsibility distribution in the sphere of environmental protection between the state, business and society. Public-private partnership (further - PPP) can become an effective platform to solve social-and-ecological tasks and activate ecological business responsibility. Public-private partnership in the field of environmental protection is a consolidation of governmental, entrepreneurial and public interests on the basis of a long-term strategy that is directed to decrease negative impact on the environment or to compensate damages caused to the environment corresponding to social-and-ecological needs of the entities and requirements of a common goal to keep sustainable development and ecological security. The PPP fundamental function is the participation of partners in the integration scheme to create added value in a production chain (Panova, 2014).

Economic growth in Russia of 2000 years didn't lead to investments inflow into an ecological and social infrastructure. Challenges of anthropogen loading for the Samara region are: in the Samara region there are over 800 large and medium-sized industrial enterprises, 44% of GRP fall into industrial sector, the region is highly urbanized, there is a high level of automobile transport development, the depreciation of fixed assets is considerable. The status of one of the most industrially developed centers of Russia costs a lot - the Samara region is included into the most ecologically unsuccessful regions. Within the research "The Samara region in social and economic system of Russia in the conditions of globalization: retrospective analysis and development prospects" (2004–2006) the experts of the Center of Environmental Policy of Russia and Lomonosov Moscow State University elaborated the system of indicators of a sustainable development for the Samara region: intensive atmosphere pollution, pollution of water resources, intensive waste formations, power consumption, depreciation coefficient of fixed assets, reforestation, investments into nature protection activities, population living in especially dangerous cities. According to three out of these indicators the Samara region took one of the worst positions in the country: depreciation coefficient of fixed assets, specific weight of nature protection investments into fixed capital and reforestation.

The development of institutional environment as a factor of investment attraction is rather significant as the PPP institute of a partnership in Russia is in embryo. In case of forming it, it is necessary to consider the following conditions: a regulatory base, authorized and responsible bodies, and also planning and goal-setting documents at the regional level.

At the federal level energy industry (505 projects), municipal industry (482 projects), transport industry (95 projects), social industry (203 projects) remain

priority. At the same time, one of the priority directions of PPP application should be the objects of environmental management. The scope of projects application: PPP projects in the sphere of environmental protection can be aimed at ecological entities upgrade, waste recycling, preserving and recovery of biological diversity, recovery and increase of recreational territory potential, tourism infrastructure development, complex territories' development, the development of city and country parks, national parks and reserves, unique natural objects combined with the exploitation right of natural or recreational resources including the income from visitors and tourists.

Having analyzed economic literature, we revealed rather small amount of special research which is devoted to the analysis of institutional environment for the development of public-private partnership in the sphere of environmental protection. E.N. Yakovleva (2013) considered a circle of tasks to solve the problem of enhancement of forms and methods to stimulate PPP in the sphere of environmental protection. B.B. Gassy (2011) considered an issue of development of partner and cooperation relations in the field of environmental management. Social and ecological business responsibility within the public-private partnership mechanism in the sphere of environmental management was considered in I.M. Potravny's (Potravny et al, 2012) works. S.P. Kalashnikova (2013) considered the promotion on the market of ecological projects of public-private partnership by means of stimulation policy. The regional aspect is considered in a work of E.V. Marker (2012).

## **Methods**

### ***Research methods***

In the course of research the following methods were used: theoretical (analysis; synthesis; specification; generalization; method of analogies); empirical (studying of experience of realized PPP projects, regulating documentation).

### ***Experimental base of research***

Pilot and experimental base of research was the Samara region from the point of view of formed institutional environment for public-private partnership in the field of environmental protection.

### ***Investigation phases***

The research of a problem was carried out in two steps:

At the first stage the theoretical analysis of existing development indicators of public-private partnership in scientific literature, analysis of approaches to determine a development level of PPP institute; the problem, the aim, and research methods are defined.

At the second stage analytical work was completed, theoretical and practical conclusions are specified, the received results are generalized and systematized.

The federal laws, resolutions and orders of the Government of the Russian Federation, the legislation of territorial entities of the Russian Federation, industry regulations of the ministries and departments of the Russian Federation, regional legal acts, regulating relations of the state and business

including the sphere of environmental protection, and also information materials of the Ministry of Natural Resources and Environmental Protection of the Russian Federation (2016), Ministry of Economic Development of the Russian Federation and Unified Information Support for public-private partnership in the Russian Federation formed an information base of research. In this article the results of the official portal "Public-Private Partnership in Russia" and "Center of Development of a Public-Private Partnership" were used.

## Results and Discussions

High interest in the interaction of the state and private business is explained by the fact that in many countries it allows solving large social and economic problems by resources consolidation of the state and private sectors, and also to serve as an instrument of authority's decentralization and giving bigger independence to regional authorities.

Russia (together with China, India, Latvia, Slovakia) has a PPP formation stage, very typical for developed countries. Despite rather insignificant experience of implementation of PPP projects (in comparison with Great Britain, Australia, Germany, France), PPP went through an origin stage in the following industries: social sphere (medical objects, objects of preschool and school education), transport (highways and airports), energetics (water supply and water disposal, heat supply), municipal sphere (objects of solid waste management). In general the classification of PPP projects in Russia is performed in industries and looks like this: power supply, housing and utility sector, water supply and water disposal, highways, social sphere, heat supply, airports, public transport, waste processing, city infrastructure, physical education and sport, railway, culture, tourism and recreation, waste management, education, preschool institutions, municipal infrastructure, road infrastructure, education infrastructure, Economics, Law, Information Technologies. From classification, we can see there is no separate category "Environmental Protection" in Russia – these or those issues of environmental protection and liquidation of cumulated ecological damage are included in the projects "waste processing", "water supply and water disposal", "waste management" - these projects have at the moment a considerable potential for solving environmental problems for certain territories. However their weight in total number of PPP projects is no more than 5%.

In the process of social and economic development of the country and the region in the project structure "not transport" industries are starting to prevail: health care, social services, education, telecommunications and environment. The PPP institute unequally has different development in developed and developing countries. In developed countries PPP is applied to develop social spheres (health care, through strengthening territorial and social - commercial ties between society, the state and business). Business in this process becomes more socially oriented. Therefore it is possible to say that such type of cooperation of business and the state is the engine of social changes (Andryushevich & Denisova, 2010).

In the last several years there is a dynamic development of public-private partnership institute, both on federal, and on regional levels. In 68 territorial entities of the Russian Federation regional laws on participation in PPP are adopted, operating procedures with PPP projects (40 regions) are developed,

representatives body (76 regions) are determined, officials have appropriate qualification (46 regions). Despite it, the level of PPP mechanisms development and the dynamics of social tasks solution is weaker than with foreign experience (Smiths, 2012).

For comprehensive consideration of the Samara region as a platform for PPP projects implementation in the sphere of environmental protection it is necessary to consider it from different points: investment appeal and an economic situation, and cumulated environmental problems. The Ministry of Economic Development of the Russian Federation together with the Center of Development of Public-Private partnership and in case of support of Chamber of Commerce and Industry of the Russian Federation annually complete a rating of Russian regions on a public-private partnership development level. In the fundamentals of methodology of the Regions Rating "PPP-2015-2016: Development of public-private partnership in territorial entities of the Russian Federation" the following criteria were put: 1) development of the institutional environment; 2) experience of PPP projects implementation; 3) investment appeal of the region. In this rating Samara took the 3rd place, although it wasn't included into top 6 regions several years ago which experience could be considered as successful. The Samara region with a PPP development level of 59,6% (while average across Russia 24,4%) fell into the category "Regions with a High Potential" as it has stable investment appeal (in spite of the fact that it has rather slight experience of projects implementation). In the register of PPP projects of the Samara region there is modernization of health care system objects, a horse-racing complex with a hippodrome, a horse arena with the case for rendering complex services of rehabilitation for the citizens of advanced age and disabled people, a zoo, a boarding house for disabled people, a highway, a ropeway, the bridge crossing the Volga River. Unfortunately, in this register there are no projects directed to liquidation of cumulated ecological damage, decrease in anthropogen impact, construction of recreational zones, ecological reconstruction of the territories. High "popularity" of the projects in a healthcare sector is, of course, a positive factor, but it testifies to a considerable amount of problems in this industry and a chronic budget deficit.

In the Order of the Ministry of Economic Development of the Russian Federation of May 15, 2014 № 266, the technique was defined, according to which the development level of the institutional environment in the sphere of PPP in the region is determined by the availability of the following criteria:

1. regional law on PPP
2. regional and municipal regulatory legal acts in the sphere of PPP
3. development program of investment activities
4. the plan of PPP implementation and/or implementation program or the address list of PPP projects in the territorial entities of the Russian Federation
5. investment fund of the territorial entities of the Russian Federation
6. bodies responsible for PPP development in the entity
7. work regulation of the divisions responsible for PPP development
8. the officials with special qualification in the sphere of PPP project management

So, we will analyze which criteria the Samara region corresponds by the development of the institutional environment (tabl.1):

**Table 1.** Criterion Meets the Samara region on the development of the institutional environment

Criterion	Correspondence	Comments
Regional law on PPP	The law of the Samara region № 72 of State Duma of July 2, 2010 "On the participation of the Samara region in public-private partnerships"	<p>The Order of the Government of the Samara region "On the approval of the Concept of projects implementation, based on public-private partnership principles" was adopted. The concept determines perspective system of legal regulation of the relations between public authorities of the region and entities of business activity in the field of projects implementation based on public-private partnership principles and also fixes the regulation doctrine of the main aspects of public-private partnership in the Samara region.</p> <p>On the basis of the Concept the law "On the Participation of the Samara Region in Public-private Partnerships" was developed and adopted which includes the principles and mechanisms of interaction with private investors. It allows reducing risks for private investments and to increase investment appeal.</p> <p>Aspects: mutual beneficial cooperation, socially important projects, improvement of life quality, effective use of budget funds. The PPP projects in the field of environmental protection are directed to improve life quality and belong to socially important projects</p>
Regional and municipal regulatory legal acts in the PPP sphere	<p>The order of the Government of the Samara region № 291 of June 24, 2009 "On the approval of the Concept of projects implementation, based on the principles of public-private partnership".</p> <p>- The order of the Regional Government from 9/19/2013 № 493 "On measures for PPP development on the territory of the Samara region" (in the application - the Order of projects preparation based on the principles of public-private partnership planned for implementation on the territory of the Samara region and also an operating procedure with PPP projects).</p> <p>- The orders of the ministry of economic development, investments and trade of the Samara region on the formation of interdepartmental working groups on structuring and projects support in a healthcare sector (№ 98 from 5/20/2015), waste</p>	<p>To implement the Federal law from 7/21/2005 No. 115 "On concessionary agreements":</p> <p>- The order of the Regional Government from 7/21/2015 № 443 "On measures for implementation of separate provisions of the Federal law "On Concessionary Agreements" on the territory of the Samara region".</p> <p>- The order of the Regional Government from 2/12/2014 № 65 "On the approval of the interaction order of executive bodies of the Samara region in case of carrying out tenders on the right of conclusion of concessionary agreements".</p>

	management (№ 39 from 3/18/2015), cultural development (No. 38 from 3/18/2015), tourism development (№ 5 from 1/22/2015), transport infrastructure development (№ 178 from 7/7/2015), developments of housing and utility sector (№ 178 from 10/6/2014), sport development (№ 194 of 21.10.14), in the sphere of social and demographic and social policy (№ 63 from 4/14/2014)	
Development program of investment activity	The state program of the Samara region "Creating favorable conditions for investment and innovative activities in the Samara region" for 2014-2018 is approved by the order of the Government of the Samara region from 11/14/2013 № 622	The Samara region implemented the Regional Investment Standard - the key project of Agency of strategic initiatives on creating favorable conditions for business in the regions, it takes the 10th place in Russia on the level of investment appeal according to a rating of Standard and Poor's, 16th place on the level of investment risk according to a rating of Expert RA agency, it is included into a group of high investment appeal according to a rating of Moody's. Regulatory framework: - The law of the Samara region from 3/16/2006 № 19 of State Duma "On the investments and state support of investing activities in the Samara region". - The order of the Government of the Samara region from 9/18/2014 № 582 "On an order of the conclusion of investment memorandum between the Government of the Samara region and the organizations realizing investment projects on the territory of the Samara region".
The plan of PPP implementation and/or the program of implementation or an address list of PPP projects on the territory of Russian Federation entities	Partially corresponds. There is no plan of PPP implementation in the Samara region, but there is an address list of projects.	On the information portal MERIT InvestSamara the register of the PPP projects is placed. Unfortunately, in this register there are no projects directed to the liquidation of cumulated ecological damage, decrease in anthropogen impact, creation of recreational zones, ecological territories recreation.
Investment fund of the territorial entities of the Russian Federation		As the Investment fund of the Russian Federation was defunct, and the Investment fund of the Samara region is not created, budgetary funds are supposed to use within federal target programs and means of development institutes  As the state support of PPP projects in the Samara region there is "Federal Center of Project Financing" JSC (JSC FCPF, subsidiary of Vnesheconombank) which is engaged in investment consulting of authorities, but finances only stages

		of projects preparation , attracts investors. As the regional authorities often do not have funds for preproject work, this organization can be very useful regarding forming a competent offer for the market and attraction private investors.
		At the regional level The Innovative fund of the Samara region, realizing PPP mechanisms, " supported" only 1% of all projects in the form of grants in the field of ecology (3 projects in ecology sector/environmental protection, total sum 12 350 thousand rubles) for the period 2007-2013. Projects in the sphere of ecology are not attractive to investors.
The bodies responsible for PPP development in the entities	Partially corresponds. The industry ministry (The Ministry of Natural Resources of the Samara region) is not involved	The interaction structure of executive bodies of the Samara region, of potential private partners and public institutions is constructed. On each project the interdepartmental group is created (representatives of executive bodies, local government bodies and other interested departments according to industrial and territorial nature of the project) which performs the analysis of feasibility and efficiency of the project, develops a road map, performs legal, financial and organizational support of the project. As at the level of the region there are no PPP projects in the sphere of environmental protection, it is logical to include in the scheme the profile ministry of natural resources of the Samara region to elaborate PPP development program in this sphere.
Work regulations of the divisions responsible for PPP development	There is no official access	
The officials with special qualification in the sphere of project management of PPP	At the level of ministries and departments.	In higher educational institutions of the Samara region there are no programs for training specialists of such profile so far. These programs are only in four educational institutions in the country: 1) Moscow State University of Foreign Affairs of Russia, Department of economic policy and public-private partnership, Master program "Public-private partnership"; 2) The Russian Academy of National Economy and Public Service in case of the Russian President, Faculty "Higher school of Corporate Management", Master program "Health Care and Public-private Partnership"; 3) St. Petersburg Polytechnical University of Peter the Great, International Business Department, Master program "Public-private partnership"; 4) Financial University under the Government of the Russian Federation, Public-private partnership Department, Master program Public-private Partnership Project Management.

By a number of formal characteristics in the Samara region there are all conditions for public-private partnership development. There is a question why there are no projects to solve environmental problems. Such projects can be aimed at liquidation of a cumulated damage, decrease in negative impact of

economic activity, recovery of environmental quality, recultivation of contaminated land, development of environmental monitoring, greening of public territories, development of a tourism infrastructure (city parks maintenance, operation of natural and recreational resources), municipal services (construction and upgrade of municipal networks, cleaning streets, garbage utilization). The conditions of forming institutional environment to develop public-private partnership in the Samara region are given in figure 2.

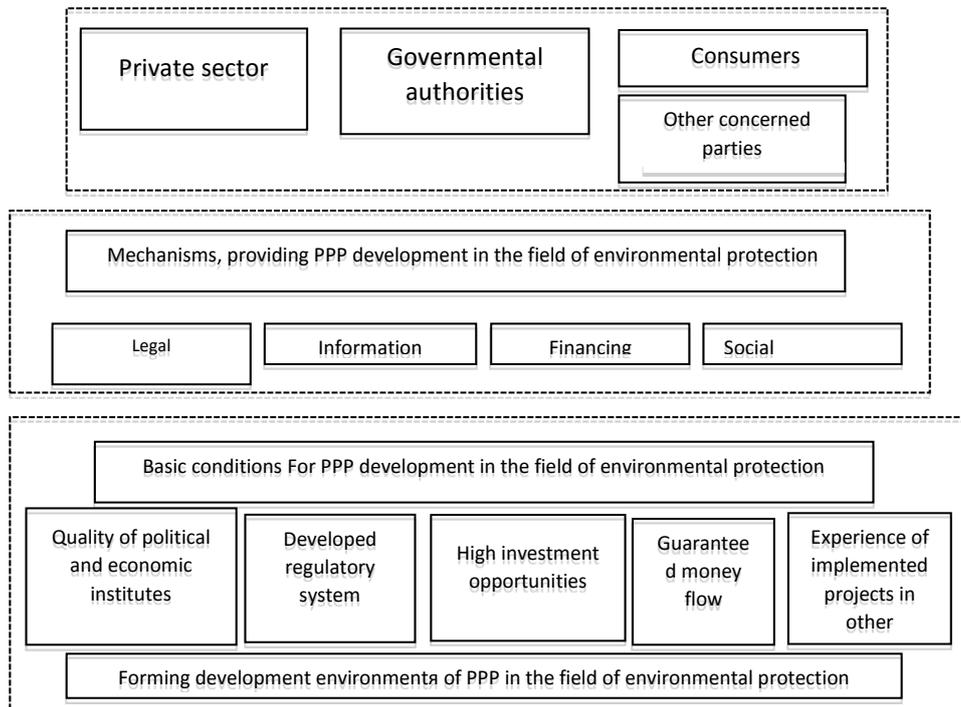
To implement PPP projects in the Samara region, 90997,37 thousand rubles of extrabudgetary funds should be operationalized:

- transport 67568,8 thousand rubles (74%)
- health care 10803 thousand rubles (12%)
- sport 6813,03 thousand rubles (7%)
- tourism 4270 thousand rubles (5%)
- social services 641,59 thousand rubles (1%) (InvestSamara)

At first, there are no data on a necessity for extrabudgetary funds to solve environmental problems. Secondly, transport and road construction remain the dominating industry so far. The choice of priority industries for PPP depends on social and economic development of the region and policy that is being implemented. Projects in "non transport" spheres, such as health care, education, environment, appear when labor productivity grows in the region, average life expectancy increases, quality of medical and social services improve, and consumption level goes up.

In general for the development of PPP mechanisms in the sphere of environmental protection of the Samara region there are the following barriers:

1. Unstable political environment and visible policy risks (change of tariff and fiscal policy)
2. Lack of political will of authorities to apply PPP mechanisms to develop ecological infrastructure, to improve environmental quality, to liquidate cumulated damage
3. Unstable indicators of social and economic development which reduce life expectancy labor productivity, life quality (mostly people are concerned about environmental issues)
4. Lack of an effective system of strategic forecasting and planning from registers of ecological indexes and indicators
5. Lack of coordination between various departments in the solution of nature protection tasks
6. Lack of competent specialists with appropriate qualification, skills in the sphere of PPP both in executive and in industry authorities.



**Figure 1.** Conditions of forming PPP in the sphere of environmental protection

At the moment in general Russia does not have experience of effective projects in the field of ecology because almost all projects in this sphere are at an initiation stage, or have been implemented for a short period of time to prove their efficiency. In general in Russia interaction of business and the state within PPP has is fragmentary that is reflected in certain agreements, projects and regional laws on PPP.

The main problems and development restrictions in the sphere of PPP are the following:

- lack of strategic goal-oriented approach to planning and development of an ecological infrastructure,
- -an insufficient level of development of regulatory and methodological system in the sphere of PPP,
- lack of a management system in the sphere of PPP at the federal level and lack of a unified model at the regional and local levels,
- an insufficient level of development of budgetary and financial mechanisms for effective PPP projects implementation,
- a low level of market development of private operators and low competition in the sphere of PPP,
- restrictions in the budget policy of the regions (budget deficit of most regions and municipalities causes essential restrictions on guarantees to benefit a private investor),
- legal novelty of PPP projects connected with a substantial risk both for officials, and for a private investor,

- lack of quality prepared projects,
- a priority of budget financing model when choosing the schemes of projects implementation,
- lack of coordination of ministries and departments,
- interaction of the state and business has an internal conflict based on a views contradiction of interaction participants on resource distribution which it is aggravated with negative impacts of political and economic environment (market regulating the demand on social services, highly competitive market environment and macroeconomic indicators fluctuation) therefore the main goal of public - private projects is to redistribute risks to that party which can effectively manage them.

The private restrictions that are characteristic of PPP in the sphere of environmental protection:

- low interest of business and the state in ecological projects and in the implementation of ecologically safe technologies,
- enterprises that use natural recourses environmental protection is not the priority direction of investment, in the Russian economy there is no tendency to create ecologically responsible business,
- low interest of the population in the solution of environmental problems,
- postponed effect of ecological investments,
- there is no accurate differentiation of responsibilities of the state and new owners (after privatization) to rehabilitate polluted territories, to utilize cumulated industrial waste, to recultivate lands.

In the Samara region PPP development should be assigned to the following development institutes:

- 1) The ministry of economic development, investments and trade of the Samara region (Projects management of public private partnership was created in 2013 as a part of Management department of projects and programs)
- 2) Ministry of industries and technologies of the Samara region
- 3) Ministry of natural resources of the Samara region
- 4) JSC “Development Corporation of the Samara Region”
- 5) JSC Federal Center of Project Financing (is a subsidiary of state-owned corporation "Development Bank and Foreign Economic Activity (Vnesheconombank)").

To develop PPP institute in the sphere of environmental protection regional documents of forecasting, goal-setting and planning are necessary to be elaborated. The scenario of social and economic development of the region should conform to the requirements of the Federal law "On Environmental Protection" № 7 of Federal Law from 1/10/2002: creation of conditions of a sustainable development, creation of knowledge economy, decrease in production resource intensity, development of high technologies, implementation of international environmental standards and requirements, development of innovative activities, etc.

**Table 2.** Document system of state planning of the Samara region

Forecasting	Goal-setting	Planning	and
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		programming
There is no forecast of social and economic development of the Samara region for a long-term period	The strategy of social and economic development of the Samara region till 2020 (ensuring ecological stability, increase in accommodation appeal of the Samara region). Strategy till 2030 is being developed.	The project plan on strategy implementation of social and economic development of the Samara region The project plan on ensuring sustainable development of economic and social stability in the Samara region for 2015 - 2017 - events on environmental protection aren't provided.
There is no budgetary forecast of the Samara region for a long-term period.		Governmental programs of the Samara region: 1) "Environmental protection of the Samara region for 2014-2020"; 2) "Forestry development of the Samara region for 2014-2018 and till 2022"; 3) "Development of a water management complex of the Samara region in 2014-2020" (Ministry of natural resources)
The forecast of social and economic development of the Samara region for the medium-term period (2016-2018) - in this forecast only two indicators regarding environmental protection are specified: amount of the repugnant substances which are thrown out in the atmosphere by stationary sources of ambient air contamination and the amount of dirty discharge		The scheme of territorial planning of the Samara region determines the goal of the territory of the Samara region proceeding from set of social, economic, ecological and other factors to ensure sustainable development of the territory of the Samara region, to develop engineering, transport and social infrastructures, to ensure interests consideration of the Russian Federation, the Samara region, municipalities of the Samara region, citizens and their communities. There are no ecological indicators.

At the moment in forecasting documents of the Samara region there are no indicators which could characterize an ecological component in economic development proceeding from relevant forecasting and social economic and macroeconomic factors (population forecast, growth of traffic load, dynamics of industrial production, the volume of investment, roads construction) are indicators of a need for ecological infrastructure objects and amounts of liquidated ecological damage, environmental capacity and etc. There are no target reference points of ecological security, indicators of sustainable development are not considered. Forecasting documents of the Samara region do

not contain scenarios and growth assessment of environmental load. The forecasting of environmental protection and environmental management allows determining regional policy in this sphere on the basis of the available information, allows planning priority directions to take them into account in case of development and financing of programs, extra program events, improvement of a regulatory legal base.

Studying of economic literature allows revealing a small amount of special research which is devoted to the analysis of institutional environment that is necessary for the development of public-private partnership in the sphere of environmental protection. Negative factors of an administrative promotion model of private investments into environmental protection, legal forms and funding mechanisms for environmental protection, incentive motives of private investors participation in PPP projects, and also legislative barriers regarding responsibility distribution for lands recultivation and territories rehabilitation are considered in T.V. Petrova's work (2010). Issues of development of partner and cooperation communications in the field of environmental management and relevance of development of interaction mechanisms of market economy entities are reflected in a work of B.B. Gassy (2011). Issues of social and ecological responsibility of business within PPP mechanism, and also methods of economic regulation of ecologically significant projects in the sphere of environmental management are rather fully considered in I.M. Potravny et al. (2012) works. The institutional environment through the attitude of enterprises' heads to PPP in the sphere of environmental protection is analyzed by G.Yu. Pakhalchak (2013). The author within the project "Research of institutional features of forming and development of effective partnership mechanisms of the state and business in a stakeholder model of corporate management: microeconomic and regional aspect" researched the issue of PPP development in the sphere of environmental protection. The empirical base of the research is a questionnaire of heads of small and medium-sized enterprises specializing in solving environmental problems. In other work of G.Y. Pakhalchak (2014) the main aspects of Waste management strategy on the territory of Sverdlovsk region till 2030 were considered where the author involved. S.P. Kalashnikova (2013) considers the promotion of PPP ecological projects on the market by means of stimulation policy. Use of concessionary tools in the sphere of waste management is considered in the article of K.P. Kolotyryna (2009). The author of this article finds considerable benefits from using concessionary schemes and reasons that the industry waste processing can be rather profitable. Also regional aspect is considered in a work of E.V. Marker (2012). She writes about the necessity of taking into account ecological factors for the scenario of social and economic development of the region, and also increase of ecological stability of the region by means of PPP projects.

E.N. Yakovleva (2013) in the article defines a circle of tasks to solve the problem of forms enhancement and stimulation methods of PPP in the sphere of environmental protection; she pays much attention to implement the provisions of governmental environmental policy of the Russian Federation by means of PPP mechanisms.

The analysis of literature allowed coming to a conclusion that public-private partnership in the sphere of environmental protection has high potential, but tools and mechanisms for such projects are still insufficiently systematized, the

legal framework is insufficiently developed. The analysis of the institutional environment of the regions is carried out from the point of view of business representatives, or the state. It is necessary to implement further research of this issue.

## Conclusion

Thus, for effective development of PPP in the sphere of environmental protection it is necessary to create a regulatory system that is adequate to modern economic conditions at federal and regional levels, to develop support mechanisms to business structures which are ready to implement ecological projects, to explain benefits of PPP among business representatives and authorities by means of trainings. It is possible to allocate major factors of PPP development in the sphere of environmental protection:

First, an effective cooperation of the state and business is possible only within observing equality and responsibility of all projects participants within PPP.

Secondly, optimum interests' consideration of both parties is necessary not only within ensuring financing, but also within final product distribution.

Thirdly, the choice criterion of a partnership party has to be an opportunity of receiving maximum effect at the expense of business potential, but not minimal resources cost and their sources.

Fourthly, up-to-date information on the condition of a cumulated ecological damage, assimilatory territory potential, environmental impact on economic entities should be available.

Fifthly, to minimize risks of joint projects, the state has to provide certain guarantees for business structures participating in the projects regarding the decrease in financial loading at the expense of privileges and preferences.

Materials of this article can be useful to representatives of authorized bodies in the sphere of PPP development. In the course of research there were new issues and problems that have to be solved. It is necessary to analyze aspects of social and economic forecasting in the region more thoroughly taking into account ecological indicators, to create an integration scheme of state and business interaction within public-private partnership in the sphere of environmental protection.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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