

Universal Decimal Classification (UDC) 614.3

ON THE IMPLEMENTATION OF RISK-ORIENTED APPROACH TO THE CONTROL AND SUPERVISORY ACTIVITIES OF RSPOTREBNADZOR IN THE KRASNOYARSK TERRITORY

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In order to improve the control system of sanitary and epidemiological welfare of the population under the control of Rospotrebnadzor in the Krasnoyarsk region, a register of legal entities and individual entrepreneurs, whose activities are subject to sanitary and epidemiological supervision was established. For each of the 21 386 economic entities the number of population was defined (workers, consumers of goods and services), the potential risk of harm to the health of these populations was calculated. The computational methods and expert assessments were used. Testing of objects classification into four classes (1-extremely high, 2-high, 3-moderate, 4 class – low risk) allowed to rank to the class 1 around 0.6% of supervised legal entities and individual entrepreneurs; to object class 2 – about 14%; to class 3 – almost 48%. More than 36.7% of business entities have been referred to the fourth class; the frequency of scheduled inspections of their activity is minimal or can be ruled out at all (in the absence of violations of sanitary legislation for certain time).

Using a risk-based planning model has streamlined planning towards increasing the share of inspections in respect of the subjects that are highly relevant and hygienically engaged in providing health care to the population (from 3.9% to 6.8%), education (from 32.8% to 55.6%), services and audits of local governments (from 0.9% to 15.2%).

Key words: *risk-based supervision, the Krasnoyarsk Region, the control and supervisory activities.*

The concept for efficiency growth in activities of state and local surveillance and enforcement bodies over 2014-2015 [4], the Russian Federation President Decree “On urgent measures for elimination of administrative barriers to entrepreneur activities” dated May, 15, 2008. No. 797, and other alterations in legislation [8,9,13,15,16], lead to changes in state surveillance and enforcement. These changes require implementing risk assessment and risk management methodology which helps to evaluate and control risks of damage to protected social values such as life, health, state, local and private property, culture, nature etc.

Public management innovations related to risk-

oriented surveillance are in line with the world trends [6,17,18] and are determined by a set of internal reasons. Russia needs advance economic development and it requires eliminating excessive red tape that economic agents face in their activities [1,3,5]. Simultaneously there are serious tasks to preserve and increase human potential which over years has been damaged by economic agents violating obligatory sanitary and epidemiological requirements to environment quality, labour and education conditions, health care services etc.

Federal service for surveillance on consumer rights and human well-being is now putting systematic approaches to risk-oriented surveillance into

Ó Goryaev D.V., Chernenko V.V., Tikhonov I.V., Fedoreev R.V., 2016

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practice. Implemented model includes potential risks evaluation system for economic agents that are subject to sanitary and epidemiological surveillance in the sphere of consumer rights protection. The system takes criteria of health damage risks into account [1,3,7,10-12].

Krasnoyarsk region requires greater development of sanitary and epidemiological welfare management. The region population now amounts to more than 2 million 866 thousand people, 76,5% of them being urban citizens. As the region is very rich in energy resources it has been able to create a huge metallurgy complex which comprises Krasnoyarskaya hydro-power station, Krasnoyarsky aluminum plant, Achinsky alumina works, and Krasnoyarsky metallurgy works. The region also has a developed civil engineering complex. Regional enterprises produce both civil and defense machinery; among them there are Nazarovsky agriculture engineering plant, "Biryusa" works, Krastyazhmash excavators producing plant and others. About 400 enterprises operate in lumbering and woodworking; for example "Eniseisky pulp and paper mill LLC", "Lesosibirsky wood working plant PLC", "Eniseylesozavod LLC", "Novoeniseisky wood-chemical plant Ltd", "DOK Enisey LLC", "Kansky wood-working plant LLC" etc.

The region is constantly among the top ten Russian regions in the innovation potential rating. Then, if we take the natural resources potential we can see that in 2014 the region took the first place. But as for labour potential the region took the 14th place only. Investments risks in the region are estimated as high; the region held the 39th position in the total rating of all Russian regions, it took the 49th place in the social risks rating and the 76th in the ecological risks rating. [2]. And we realize that the region will become more attractive for investors only if we improve surveillance over those economic agents whose activities can exert negative influence on population, workers, and environment.

Krasnoyarsk regional office of Federal service for surveillance on consumer rights protection and human wellbeing (herein the Office) has set the task to implement a new risk-oriented approach to surveillance and enforcement; this approach requires creation of the economic agents register, risk potential category definition, as well as development of practices aimed at optimizing and improving quality of inspections scheduling.

Data and methods. To achieve the set goals the Office has completed the number of tasks. First, information sources necessary to create the economic agents register have been defined. Second, risk-

oriented planning has been implemented into the Office surveillance and enforcement activities. Third, the economic agents register has been created and it comprises all the economic agents that are subject to the Office surveillance. Then, with the use of the implemented model the Office has calculated risk potential for each economic agent and has defined a risk category for all of them. And lastly, the Office has formed a set of the economic agents with the highest risk potential in order to include them into the inspection schedule for 2016.

As the information sources for the register creation we used the following data: archival data obtained during surveillance and enforcement activities in 2012-2014; the Tax inspection data uploaded through "Planning" (the computer program designed by the Office); the register of sanitary and epidemiological certificates issued for project documentation (sanitary protection zones, maximum permissible discharges); sanitary and epidemiological certificates issued for economic agents operating in health care, pharmaceutical, and educational spheres; the register of new companies foundations; "on-line inspections" information data taken from the Rospotrebnadzor official web-site; data from the Internet and the 2-GIS online maps service; laboratory research database belonging to Federal public health-care agency "Hygiene and Epidemiology Center of Krasnoyarsk region".

All the data from various sources were checked with the use of statistical reports forms. We applied calculation method and expert evaluation method to implement risk-oriented planning. Calculation method allowed us to distribute all the economic agents into 4 categories according to the criteria used in calculations and to the data available on the economic agents. Broad use of expert evaluation technique gave us the possibility to define economic agents with higher hygienic significance and to put them into higher risk category. Such agents were later included into the field inspections schedule.

Results. The economic agents register comprising 21 386 companies and private entrepreneurs is the primary result of our work. The economic agents were distributed into 4 risk categories with the use of calculation method. The results are presented in Table 1.

The obtained results led to necessity to carry out expert evaluations aimed at defining a factual risk category for each economic agent with taking the sphere of activity into consideration. The classification of expertly defined priority economic agents looks as follows:

-the first risk category is given to economic agents dealing with water supply and sewerage, as well as water objects in waster consumption places (water reservoirs of the 1st and 2nd class);

-the second risk category is given to economic agents in the sphere of health-care services and social services;

-the second and the third risk categories are given to child-care and teenage facilities, food industry, and catering;

-the third risk category is given to industry, grocery stores, residential use goods distribution, as well as economic agents that operate in the spheres where violation of consumer rights is more likely to take place (such as financial services, transport, personal services, housing and communal services, communication, tourism, housing building based on cofinancing etc.). The activities distribution is shown in Table 2.

The created register was optimized with the use of techniques developed by the Office and applied in planning inspections schedule for 2016. It allowed us to achieve the following:

1. To exclude economic agents from the 4th category from the inspection schedule.

2. To include the maximum number of the 1st category economic agents into the inspection schedule provided that these agents are subject to surveillance and are not to be released of any inspections according to legislation [7, 8, 11, 12].

3. To include the 2nd and 3rd category economic agents into the inspection schedule in accordance with the main activities of Rospotrebnadzor, as well as with the factual amount of inspections that our specialists are to accomplish.

4. To define the priority of economic agents among those from the 2nd and 3rd risk categories who deal with education, water supply and sewerage, food industry, as well as industrial enterprises as sources of negative impacts on the environment.

As a result, the inspections schedule for 2016 includes a set of economic agents, 1.5% of them have the 1st risk category, 19.3% - the 2nd risk category and 79.2% - the 3rd risk category (Table 3).

Table 1

Economic agents classification, risk potentia

Indicator	Total	Risk potential category			
		I	II	III	IV
Economic agents quantity	21386	128	3143	10246	7869
Rate, %	100,0	0,6	14,7	48,0	36,7

Table 2

Economic agents distribution considering various activities, as per risk categories (in %)

Activity	Risk potential category				Total for 4 category
	I	II	III	IV	
Health care and social services	0.2	3.9	1.0	–	5.1
Public utilities (water collection, purification and distribution, sewage and waste disposal)	0.3	0.7	1.1	–	2.1
Residential use goods distribution	–	–	3.2	1.2	4.4
Child-care and teenage facilities	–	7.6	9.0	–	16.6
Food industry and catering	–	0.8	0.6	0.1	1.5
Grocery stores and chemists'	–	0.5	10.1	5.2	15.8
Industries (agriculture, mining, processing industries, steam and electricity production, construction, communication, transport)	0.1	1.7	16.2	10.3	28.3
Personal services (hairdressers', hotels, real estate operations, housing stock management etc.)	–	–	6.2	20.0	26.2

Table 3

Economic agents distribution in the inspections schedule for 2016

Risk potential category	Number of economic agents	Rate. %
I rank – extremely high	11	1.5

risk potential		
II rank – high risk potential	142	19.3
III rank – moderate risk potential	570	79.2
Total	723	100.0

If we outline the spheres where the economic agents included into the inspection schedule for 2016 operate we can see that the greatest number of such agents deal with education (55.6%), health care (6.8%), public utilities, social and personal services (12.6%). There is also a big number of local government bodies who manage the sources of drinking water supply and water supply for residential use as well as other communal facilities with high hygienic significance.

The use of risk-oriented model allowed us to optimize planning and to increase the rate of inspections for the agents with high hygienic significance and for the agents that provide health care (from 3.9% to 6.8%), educational services (from 32.8% to 55.6%), as well as the rate of inspections for local government bodies (from 0.9% to 15.2%).

We should point out that we didn't fully use the possibility to apply social and hygienic monitor-

ing data when classifying economic agents according to their risk potential. Still we believe that the expert evaluation allowed us to take all the existing data into account.

Long-term monitoring of various factors which form population environment can provide additional information and give more specific characteristics of economic agents whose activities lead to chemical and physical pollution of air, soil and water.

Conclusion

In order to achieve the set goals the Office implemented risk-oriented model into practice and it helped us to increase surveillance quality and efficiency. It allowed us to concentrate our attention on economic agents with extremely high, high and moderate risk potential; to lower administrative barriers for economic agents with insignificant risk potential; to provide communication and interaction with business community in the sphere of surveillance and inspections schedule planning; to optimize the workload for the Office specialists; to secure further effective planning of surveillance and enforcement considering hygienic and social significance of the economic agents operating in Krasnoyarsk region.

References

1. Zaitseva N.V., May I.V., Kir'yanov D.A., Sboev A.S., Andreeva E.E. Konceptual'nye i metodicheskie aspekty povysheniya jeffektivnosti kontrol'no-nadzornoj dejatel'nosti na osnove ocenki opasnosti ob'ekta s pozicij riska prichinenija vreda zdorov'ju naselenija [Conceptual and methodological aspects of improving the effectiveness of control and supervisory activities based on hazard and risk assessment and estimation of harm to health of the population]. *Zdorov'e naselenija i sreda obitaniya*, 2014, no. 12 (261), pp. 4–7. (in Russian).
2. Investicionnyj risk rossijskikh regionov v 2014 [Investment risk of Russian regions in 2014]. Available at: http://raexpert.ru/rankingtable/region_climat/2014/tab02/ (12.01.2015). (in Russian).
3. Klassifikacija hozjajstvujushhih sub'ektov i vidov dejatel'nosti po poten-cial'nomu risku prichinenija vreda zdorov'ju cheloveka dlja organizacii pla-novyh kon-trol'no-nadzornyh meroprijatij: Prikaz Rospotrebnadzora ot 30.09.2015 № 1008 o vne-drenii MR [Classification and types of business entities on the potential risk of harm to human health activities for the organization of planned supervisory activities: Order of Rospotrebnadzor dated 30.09.2015 №1008 on the introduction of MRI]. Available at: <http://docs.cntd.ru/document/420328532> (10.12.2015). (in Russian).
4. Kontrol'no-nadzornaja dejatel'nost' Rossijskoj Federacii: Analiticheskij doklad – 2014 [Control and supervisory activities of the Russian Federation: Analytical Report - 2014]. Moscow: MAKS Press, 2015, 120 p. (in Russian).
5. Koncepcija povysheniya jeffektivnosti kontrol'no-nadzornoj dejatel'nosti organov gosudarstvennoj vlasti i organov mestnogo samoupravlenija na 2014–2018 gody: Proekt [The concept of increasing the efficiency of control and supervision of public authorities and local governments in the years 2014 - 2018: Project]. Available at: <https://docviewer.yandex.ru/?url=http%3A%2F%2Far.gov.ru%2Ffiles%2Flibrary%2F1429295450.src.doc-d&name=1429295450.src.doc-d&lang=ru&c=56f906536299> (10.10.2014) (in Russian). (in Russian).
6. Ob utverzhdenii perechnja vidov dejatel'nosti v sfere zdavoohranenija, sfere obrazovanija i social'noj sfere, osushhestvljaemyh juridicheskimi licami i individual'nymi predprinimateljami, v otnoshenii kotoryh planovye proverki provodjatsja s ustanovlen-noj periodichnost'ju: Postanovlenija Pravitel'stva ot 23 nojabrja 2009 g. N 944. [On approval of the list of activities in the field of health, education and social services carried out by legal entities and individual entrepreneurs, for whom scheduled inspections are carried out at specified intervals: Government Decree of November 23, 2009 N 944]. Available at: <http://docs.cntd.ru/document/902186651> (10.02.2016) (in Russian).
7. Ob utverzhdenii Pravil podgotovki organami gosudarstvennogo kontrolja (nadzora) i organami municipal'nogo kontrolja ezhegodnyh planov provedenija planovyh proverok juridicheskikh lic i individual'nyh predprini-

matelej: Postanovlenie Pravitel'stva RF ot 30 ijunja 2010 N 489 (red. ot 24.12.2015) [On approval of Rules of preparation by state control (supervision) and municipal control bodies of the annual plan of scheduled inspections of legal entities and individual entrepreneurs: Resolution of the Russian Government dated 30 June 2010 N 489 (as amended on 12.24.2015)]. Available at: <http://docs.cntd.ru/document/902223988> (10.02.2016). (in Russian).

8. Onishhenko G.G. Konceptija riska i ee mesto v sisteme social'no-gigienicheskogo monitoringa [The concept of risk and its place in public health monitoring system]. *Vestnik Rossijskoj Akademii medicinskih nauk*, 2005, no. 11, pp. 27–33. (in Russian).

9. O vnedrenii risk-orientirovannogo podhoda v kontrol'no-nadzornuju dejatel'-nost' territorial'nyh organov Rospotrebnadzora: Prikaz Rospotrebnadzora ot 25.05.2015 № 464 [On implementation of the risk-based approach to the control and supervisory activities of the territorial bodies of Rospotrebnadzor: Order of the Rospotrebnadzor dated 25.05.2015 №464]. Moscow: Federal'naja sluzhba po nadzoru v sfere zashhity prav potrebitelej i blagopoluchija cheloveka, 2015, 20 p. (in Russian).

10. O zashhite prav juridicheskich lic i individual'nyh predprinimatelej pri osushhe-stvlenii gosudarstvennogo kontrolja (nadzora) i municipal'nogo kontrolja: Federal'nyj zakon ot 26 dekabnja 2008 g. № 294-FZ (red. ot 09.03.2016) [On protection of rights of legal entities and individual entrepreneurs in the exercise of state control (supervision) and municipal control: the Federal Law of 26 December, 2008 № 294-FZ (edited on 03/09/2016)]. Available at: <http://docs.cntd.ru/document/902135756> (11.03.2016). (in Russian).

11. O razvitii malogo i srednego predprinimatel'stva v Rossijskoj Federacii: Federal'nyj Zakon ot 24 ijulja 2007 goda № 209-FZ [On the development of small and medium enterprises in the Russian Federation: the Federal Law of 24 July 2007 № 209-FZ]. Available at: <http://www.ib.ru/law/3247> (дата обращения: 12.12.2015). (in Russian).

12. O sostojanii sanitarno-jepidemiologicheskogo blagopoluchija naselenija v Rossijskoj Federacii v 2013 godu: Gosudarstvennyj doklad [On the state of sanitary and epidemiological welfare of the population in the Russian Federation in 2013: State Report]. Moscow: Federal'naja sluzhba po nadzoru v sfere zashhity prav potrebitelej i blagopoluchija cheloveka, 2014, 215 p. (in Russian).

13. Popova A.Ju., Zaitseva N.V., May I.V., Kir'yanov D.A. Metodicheskie podhody k raschetu fakticheskich i predotvrashhennyh mediko-demograficheskich i jekonomicheskich poter', associirovannyh s negativnym vozdejstviem faktorov sredi obitanija [Methodological approaches to the calculation of actual and prevented as a result of the control and supervisory activities, medical-demographic and economic 95 losses, associated with the negative impact of environmental factors]. *Gigiena i sanitarija*, 2015, vol. 94, no. 7, pp. 95–99. (in Russian).

14. Raschjot pokazatelej, harakterizujushhich chislennost' naselenija pod vozdejstviem faktorov potencial'nogo riska prichinenija vreda zdorov'ju cheloveka ob'ektami sanitarno-jepidemiologicheskogo nadzora: Prikaz Rospotrebnadzora ot 07.10.2015 № 1025 o vnedrenii MR [Calculation of indicators characterizing the population under the influence of factors of the potential risk of harm to human health by the objects of Sanitary and Epidemiological Surveillance: Order of Rospotrebnadzor dated 07.10.2015 №1025 on the introduction of MRI]. Available at: <http://docs.cntd.ru/document/420330655> (10.02.2016) (in Russian).

15. Ryzhakov S.A., Zaitseva N.V., May I.V., Alekseev V.B., Podluzhnaja M.Ja., Kir'janov D.A. Makroekonomicheskij analiz poter' zdorov'ja, verojatnostno obuslovlennyh jemis-sijami zagrijaznjajushhich veshhestv v atmosferyj vozduh [Macroeconomic analysis of the health loss probability due to emissions of pollutants into the air]. *Permskij medicinskij zhurnal*, 2009, Vol. 26, no. 3. pp. 139–143. (in Russian).

16. Hampton P. Reducing administrative burdens: effective inspection and enforcement Available at: <http://www.corporateaccountability.org.uk/dl/regulation/hampton/hamptonintrepdec2004.pdf> (12.10.2014)

17. Leeves G.D., Herbert R.D. Economic and environmental impacts of pollution control in a system of environment and economic interdependence *Chaos, Solitons & Fractals*, 2002, Vol. 13, no. 4, pp. 693–700.