

БЕЗОПАСНОСТЬ ТЕХНОГЕННЫХ И ПРИРОДНЫХ СИСТЕМ

Safety of Technogenic and Natural Systems

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THE RESULTS OF THE ANALYSIS OF THE SITUATION WITH FIRES IN THE REPUBLIC OF CRIMEA AND SEVASTOPOL

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The article describes the main indicators of the situation with fires in the Republic of Crimea and Sevastopol.

Their comparative analysis with values of indicators of a situation with fires across Russia and the southern Federal district is carried out.

It is shown that the average number of fires (per 1,000 people) in the Republic of Crimea and Sevastopol is less than in the southern Federal district and the Russian Federation as a whole in 2017. On the basis of the conducted research the directions of increase of combat readiness to performance of tasks on purpose of divisions of fire protection of the Crimean Peninsula are defined.

Keywords: the situation with fires, dead, injured, material damage, Crimea, Sevastopol.

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РЕЗУЛЬТАТЫ АНАЛИЗА ОБСТАНОВКИ С ПОЖАРАМИ НА ТЕРРИТОРИИ РЕСПУБЛИКИ КРЫМ И Г. СЕВАСТОПОЛЯ

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Рассмотрены основные показатели обстановки с пожарами на территории Республики Крым и г. Севастополя. Проведен их сравнительный анализ со значениями показателей обстановки с пожарами по России и Южному Федеральному округу.

Показано, что среднее количество пожаров (в расчете на 1 тыс. чел. населения) на территории Республики Крым и в г. Севастополь меньше, чем на территории Южного федерального округа и в Российской Федерации за 2017 год. На основе проведенного исследования определены направления повышения боеготовности к выполнению задач по предназначению подразделений пожарной охраны Крымского полуострова.

Ключевые слова: обстановка с пожарами, погибшие, травмированные, материальный ущерб, Крым, Севастополь.

Introduction. A sufficient number of statistical, analytical and other materials confirm that the Crimean Peninsula territory is exposed to a wide range of natural, man-made and biological and social hazards that pose a threat of emergency situations. Their study and systematization became the basis for assessing the risks of emergencies and fires, ranking the Peninsula by types of threats and optimizing measures to protect the population and territories taking into account the specifics of the Crimean Peninsula [1].

Problem statement. To analyze the situation with fires in the Republic of Crimea and Sevastopol, we used data on the number of fires, the dead and injured people in fires, direct material damage from fires from 2014 to 2017 in the subjects of the Russian Federation on the basis of statistical information from the Federal Data Banks (hereinafter — FDB) of FGBU VNIIPO of EMERCOM of Russia. Population indicators of the subjects of the Russian Federation are formed based on the data published by the State Committee of the Russian Federation on Statistics [4].



Theoretical part. Representative statistical data sets are used, as a rule, in the study of fire danger to the country, region, and settlements. Relative estimates are used for comparative evaluation of fire safety of regions. To do this, it is necessary to assess the probability of fire and assess the probability that the action of fire damaging factors will lead to human health damage (death or injury) [5-14].

One of the basic indicators necessary for the calculation of fire risk assessment is the frequency of fire during the year per one object or per one person (worker, student, visitor, etc.). Other relative indicators of the situation with fires are calculated the same way.

Table 1 shows the initial statistical data for the analysis of the situation with fires in the Republic of Crimea and Sevastopol of the Southern Federal District of the Russian Federation for 2017.

Table 1
Statistical data for the analysis of the situation with fires in the Republic of Crimea and
Sevastopol of the Southern Federal District of the Russian Federation for 2017

Geographical	Popula-	Number	Number of	Number of	Number	Direct mate-
administrative	tion,	of fires,	catching	fatalities in	of injured	rial damage,
division	thousand	unit	fires, unit	fires, victim	people in	thousand
	people				fires, vic-	rub.
					tim	
Sevastopol	436.7	267	1470	8	20	17243
Republic of	1913.7	989	5667	65	76	63850
Crimea	1713.7	707	3007	03	70	03830
Southern	16441.8	11543	50964	724	986	749214
Federal District	10441.0	11343	3070 1	724	700	777214
Russian	146880	132844	314229	7816	9355	13767378
Federation	170000	132044	317227	7010	7555	13/0/3/0

As all the indicators of fire situation have strong positive dependence on population, for the analysis and comparison of indicators of fire situation in the Republic of Crimea and Sevastopol with all-Russian, we used relative indicators of fire situation per one thousand people of the population (Table 2) and per one fire (Table 3).

Table 2
Relative indicators of fire situation in the Republic of Crimea and Sevastopol of the Southern
Federal District of the Russian Federation for 2017 on average per 1 thousand people.

					O I	1 1
Geographical	Populati	Average	Average	Average	Average num-	Average
administrative	on,	number	number of	number of	ber of injured	direct mate-
division	thousan	of fires,	catching	fatalities in	people in fires,	rial damage,
	d	unit/tho	fires,	fires, vic-	vic-	rub./person
	people	usand	unit/thousa	tim/thousan	tim/thousand	
		people	nd people	d people	people	
Sevastopol	436.7	0.61	3.37	0.018	0.046	39.48
Republic of	1913.7	0.52	2.96	0.034	0.040	33.36
Crimea						
Southern	16442	0.70	3.10	0.044	0.060	45.57
Federal District						
Russian	146880	0.90	2.14	0.053	0.064	93.73
Federation						

Table 3
Relative indicators of fire situation in the Republic of Crimea and Sevastopol of the Southern
Federal District of the Russian Federation for 2017 on average per 1 fire

Geographical administrative division	Populati on, thousan d people.	Number of fires, unit	Number of catch- ing fires, unit	Average number of fatalities in fires, vic- tim/fire	Average number of injured people in fires, vic- tim/fire	Average direct material dam- age, thousand rub./fire
Sevastopol	436.7	267	1470	0.030	0.075	64.58
Republic of Crimea	1913.7	989	5667	0.066	0.077	64.56
Southern Federal District	16442	11543	50964	0.063	0.085	64.91
Russian Federation	146880	132844	314229	0.059	0.070	103.64

Table 2 shows that the average number of fires (per 1,000 people) in the Republic of Crimea and Sevastopol is less than in the Southern Federal District and in the Russian Federation in 2017. It is necessary to pay attention to the greater value of the "average number of fires" indicator in the Republic of Crimea and Sevastopol in comparison with the all-Russian values for 2017. This fact may indicate a greater number of factors causing fire danger in the Republic of Crimea and Sevastopol, and the increased readiness of fire and rescue divisions of the Republic of Crimea and Sevastopol, which in time found the most number of fire outbreaks and managed to localize them, without bringing them to big fires.

It should be noted that the average number of people injured in fire in the Republic of Crimea and Sevastopol is higher than the all-Russian values for 2017, but do not exceed similar indicators for the Southern Federal District (Fig. 1).

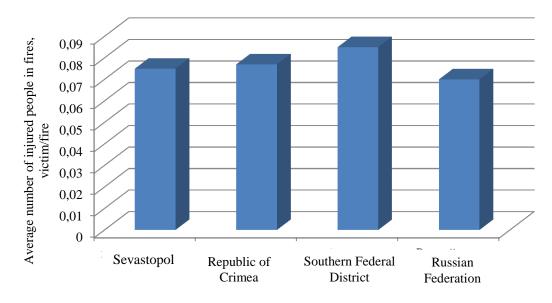


Fig. 1. Comparison of the average number of people injured in fires per 1 fire in the Republic of Crimea, Sevastopol, the Southern Federal District and the Russian Federation for 2017

Fig. 2-5 show the dynamics of relative indicators of fire situation from 2014 to 2017 per 1 thousand people (for fires) and per fire 1 (the death and injury of people in fires). It is necessary to pay atten-

tion to the increase in the number of fires per 1 thousand people in the Republic of Crimea and the excess of this indicator in Sevastopol over the all-Russian values. Also noteworthy is the growth in the average number of injured people in fires that occurred in the Republic of Crimea in 2014-2017, per 1 fire.

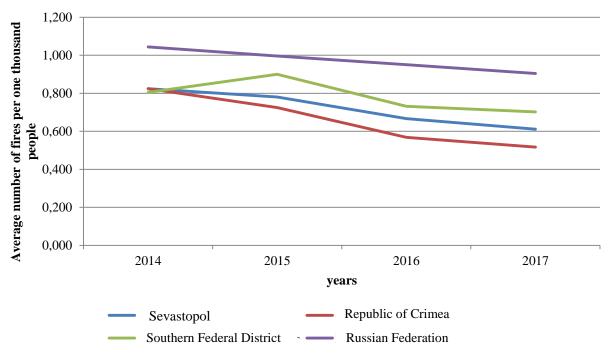


Fig. 2. Dynamics of changes in the average number of fires that occurred in the Republic of Crimea, Sevastopol, Southern Federal District and the Russian Federation in 2014-2017

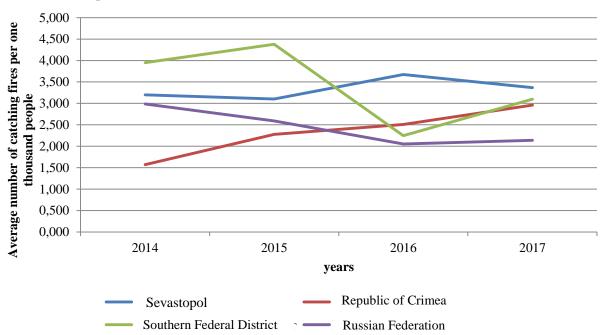


Fig. 3. Dynamics of changes in the average number of catching fires that occurred in the Republic of Crimea, Sevastopol, the Southern Federal District and the Russian Federation in 2014-2017

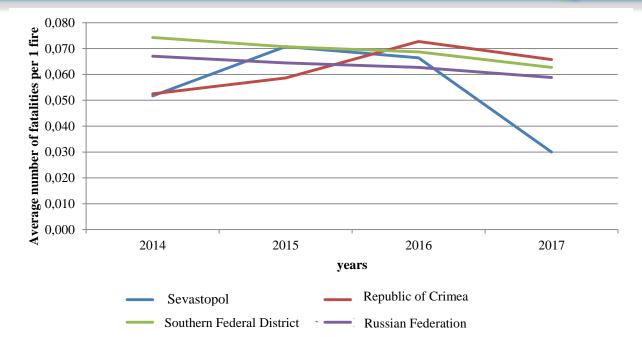


Fig. 4. Dynamics of changes in the average number of fatalities in fires that occurred in the Republic of Crimea, Sevastopol, the Southern Federal District and the Russian Federation in 2014-2017, per 1 fire

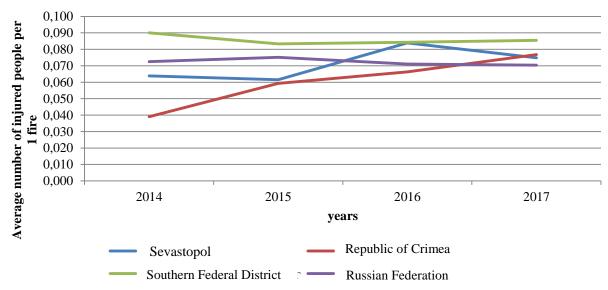


Fig. 5. Dynamics of changes in the average number of injured people in fires that occurred in the Republic of Crimea, Sevastopol, the Southern Federal District and the Russian Federation in 2014-2017, per 1 fire

Conclusion. Based on the analysis of the fires situation indicators state, it can be concluded that the fire and rescue departments of the Republic of Crimea, Sevastopol are ready to solve the problems of fire safety. Directions for possible increase of readiness of fire and rescue departments of the Republic of Crimea and Sevastopol for the solution of tasks of ensuring fire safety — decrease in the number of fires in the controlled territory and decrease in the level of traumatism at fires are determined.

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