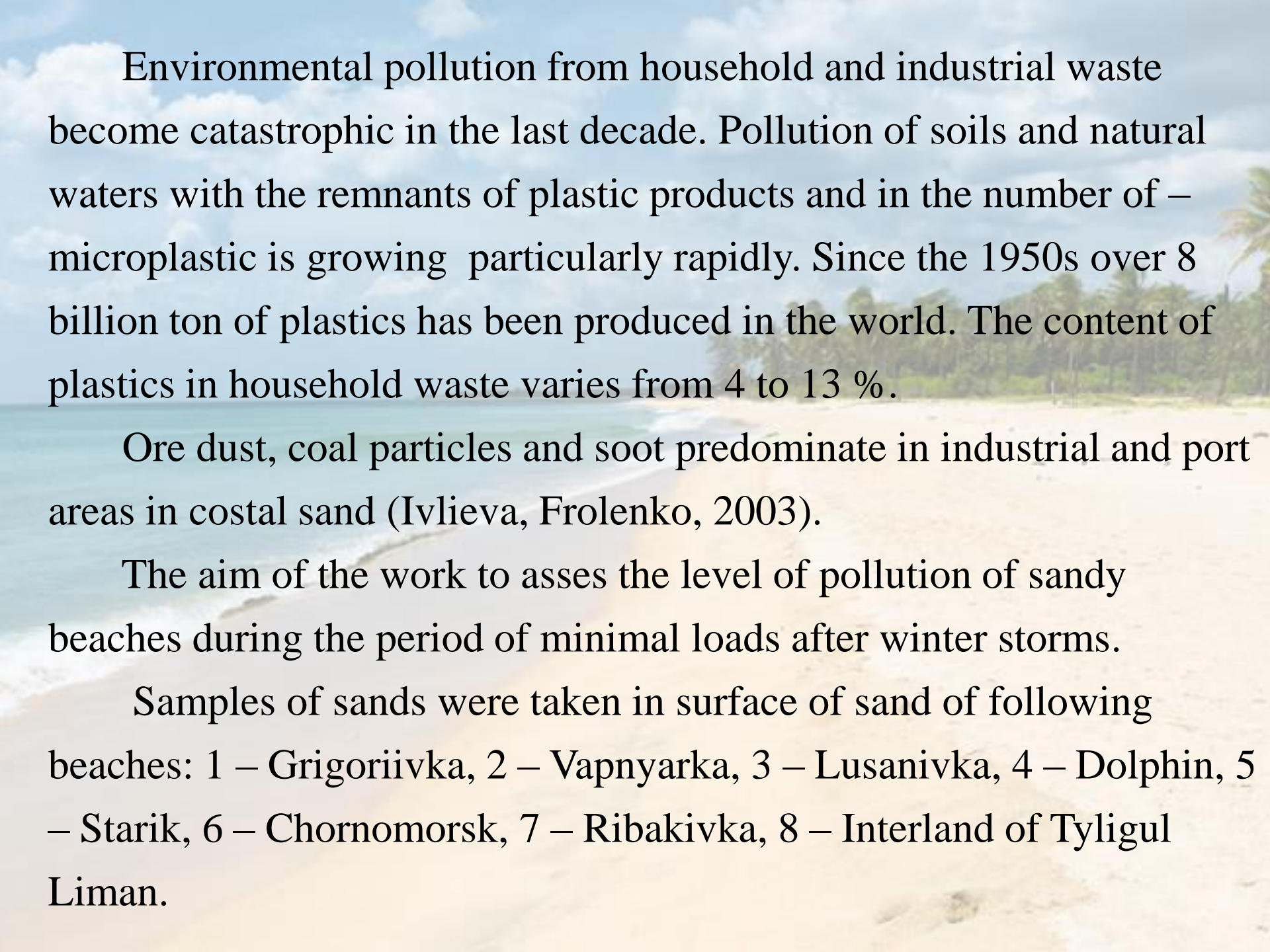


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POLLUTION OF MARINE SANDS OF ODESSA AGGLOMERATION

Odessa 2019



Environmental pollution from household and industrial waste become catastrophic in the last decade. Pollution of soils and natural waters with the remnants of plastic products and in the number of – microplastic is growing particularly rapidly. Since the 1950s over 8 billion ton of plastics has been produced in the world. The content of plastics in household waste varies from 4 to 13 %.

Ore dust, coal particles and soot predominate in industrial and port areas in costal sand (Ivlieva, Frolenko, 2003).

The aim of the work to asses the level of pollution of sandy beaches during the period of minimal loads after winter storms.

Samples of sands were taken in surface of sand of following beaches: 1 – Grigoriivka, 2 – Vapnyarka, 3 – Lusanivka, 4 – Dolphin, 5 – Starik, 6 – Chornomorsk, 7 – Ribakivka, 8 – Interland of Tyligul Liman.

Name and size of sand fractions by (Rukhin, 1961)

Name of fractions		Sizes of fractions, mm
grave	large gravel	10–5
	medium gravel	5–2,5
	little gravel	2,5–1,0
send	large sand	1,0–0,50
	medium sand	0,50–0,25
	little sand	0,25–0,10
silty	large silty	0,10–0,05
	little silty	0,05–0,01
pelitic or clayey	large pelitic	0,01–0,005
	medium pelitic	0,005–0,001
	subcolloid	< 0,001

Fractional Composition of Marine Sand of Odessa Agglomeration

Fraction, mm	Station numbers							
	1	2	3	4	5	6	7	8
>2,00	6,8	0,3	0,5	1,6	19,2	0,4	0,0	1,3
1,00–2,00	10,4	1,9	9,4	6,6	28,4	2,4	2,2	7,0
0,50–1,00	18,4	28,5	35,3	47,3	41,3	28,8	10,0	17,2
0,25–0,50	38,9	64,1	20,1	40,0	10,6	67,4	31,9	35,4
0,10–0,25	22,6	4,7	28,0	4,0	0,4	1,1	42,1	32,2
<0,10	2,8	0,4	6,5	0,5	0,1	0,0	13,9	7,0

Примечания. 1 – Grigoriivka, 2 – Vapnyarka, 3 – Lusanovka, 4 – Dolphin, 5 – Starik, 6 – Chornomorsk, 7 – Rybakivka, 8 – Interland of Tyligul Liman

Content of Organic Carbon and Oil Products in the Sea Sands of the Odessa agglomeration

Name of Sampling Stations	Content of C_{org} , %	Content of Oil Products $mg \cdot g^{-1}$
1. Grigoriivka	—	0,00
2. Vapnyarka	0,150	0,00
3. Luzanivka	0,030	0,04
4. Dolphin	0,170	0,01
5. Starik	—	0,01
6. Chornomorsk	0,170	0,02
7. Rybakivka	0,250	0,02
8. Interland of Tyligul Liman	0,170	0,01

Content of Inclusions in Marine Sands of the Odessa Agglomeration

