

Mining & Processing of Phosphate Raw Material in Russia

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The Khibiny Mountains on the Kola Peninsula

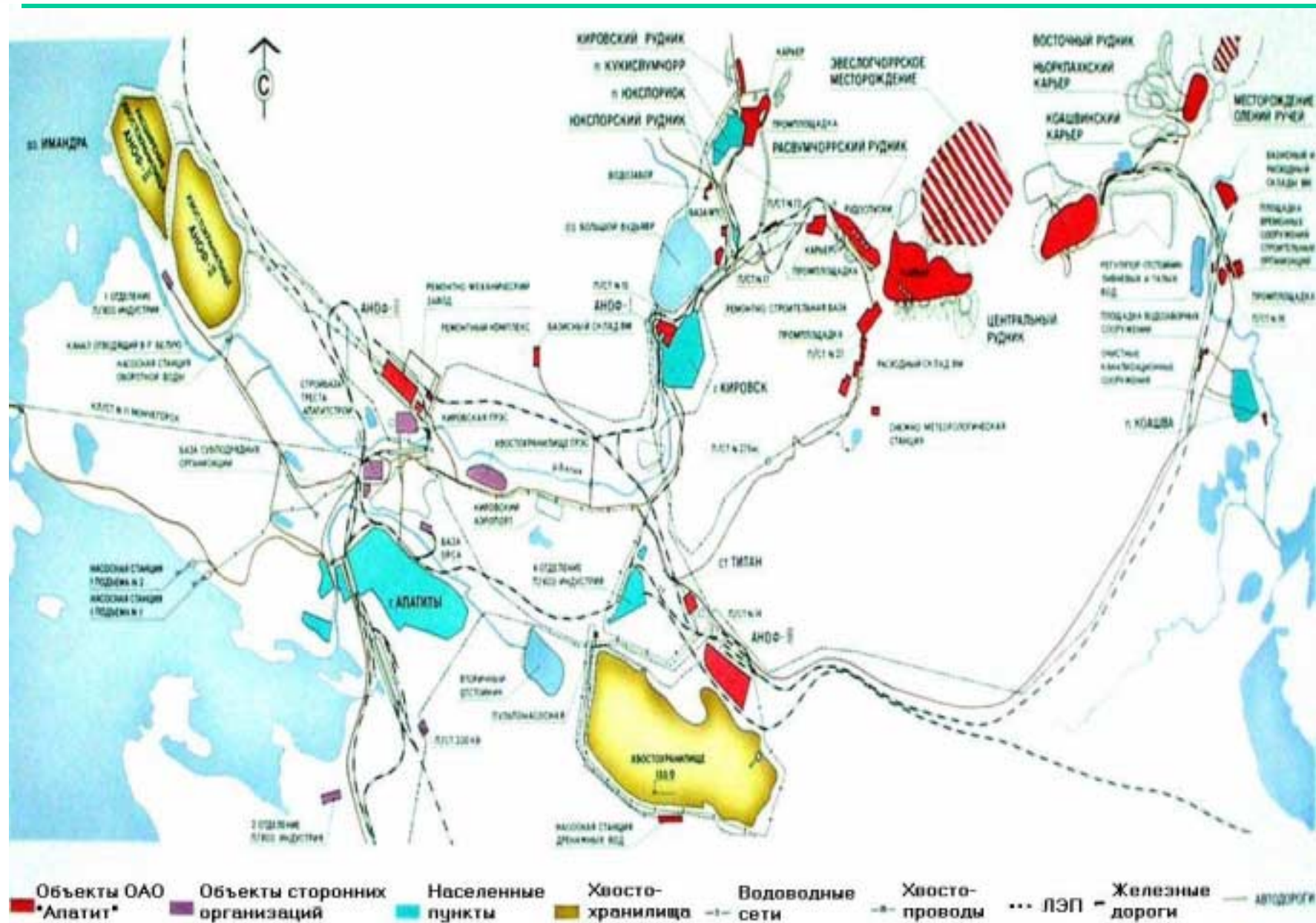


The Structure of the JSC “Apatit”



- 4 mines
- Processing complexes
- Railway subdivision
- Automobile subdivision
- 20 subsidiary subdivisions

The Scheme of the “Apatit” General Plan

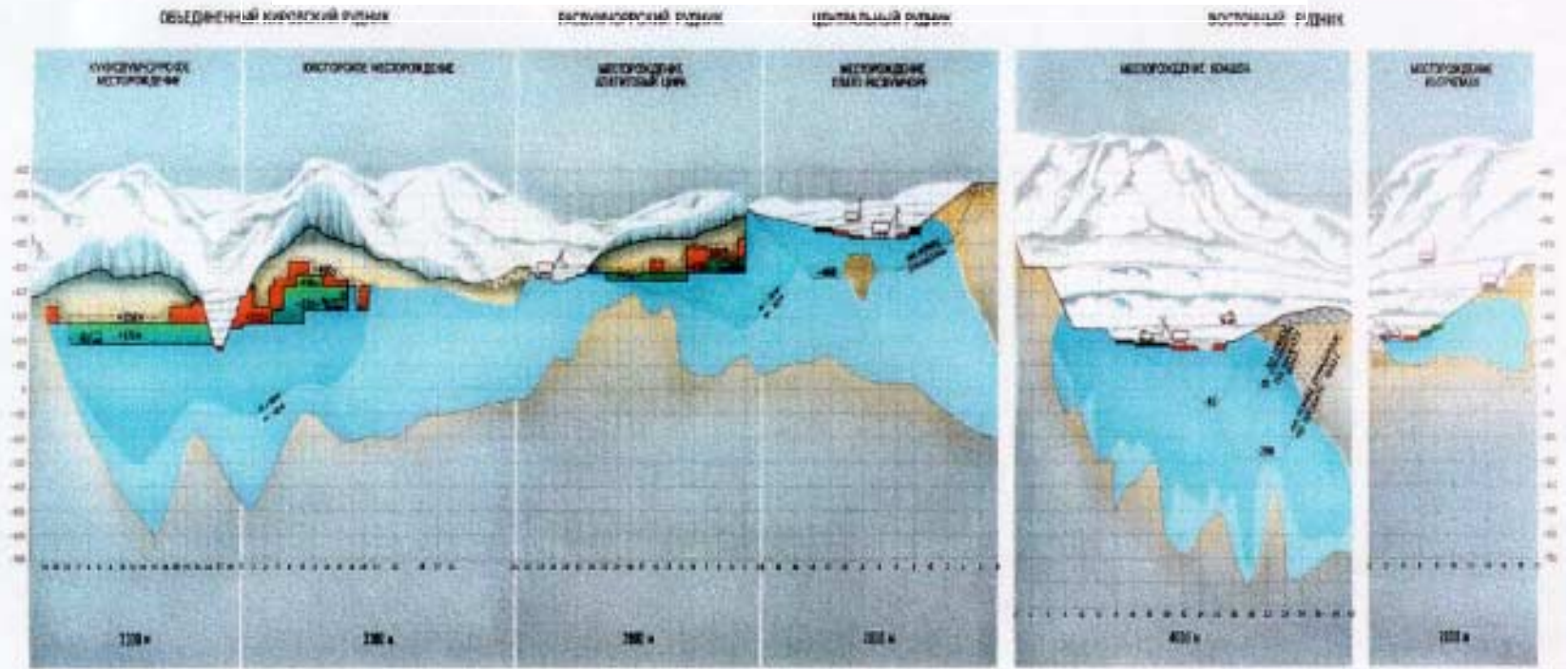


1929 – 2003

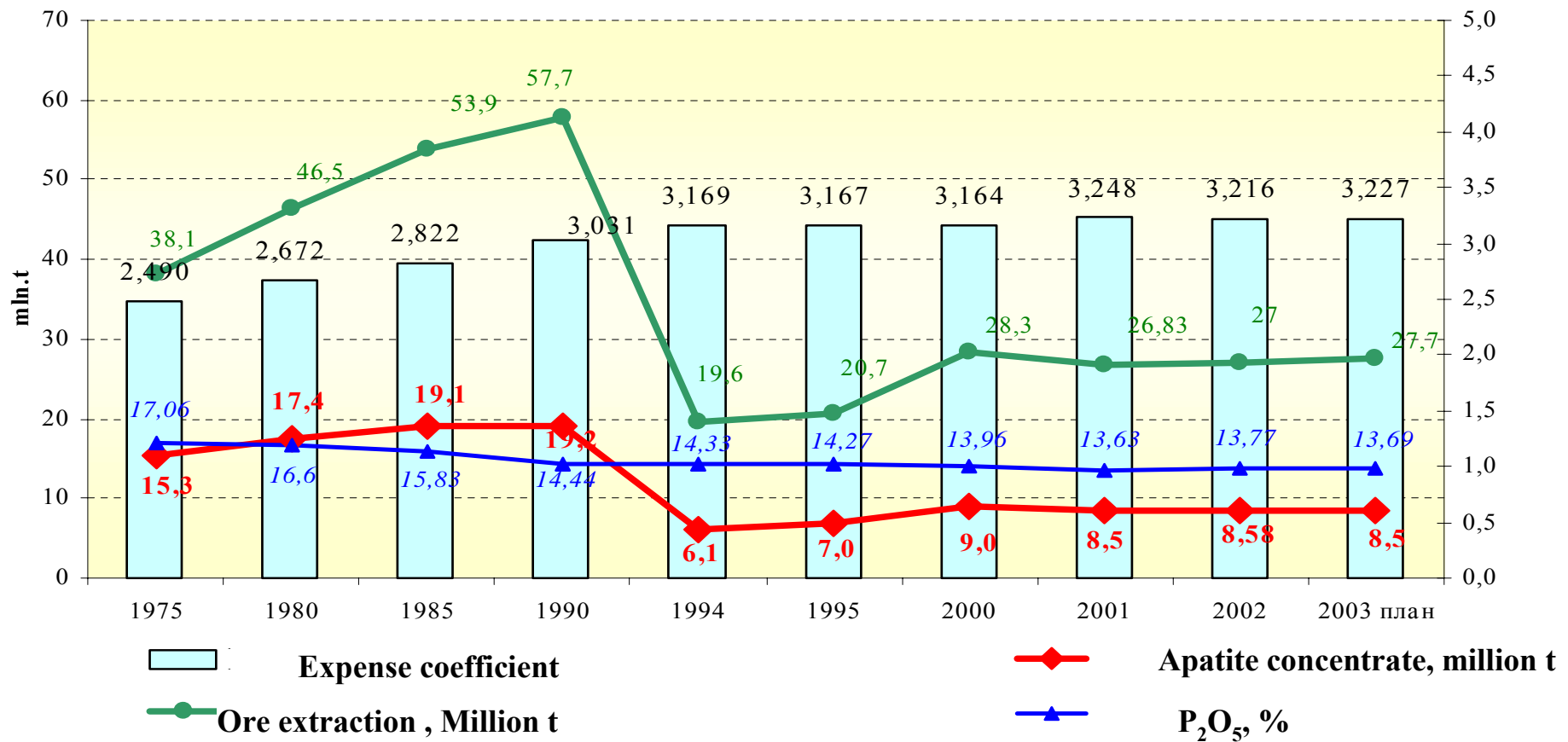


- Extracted more than 1,5 billion tonnes of ore
- Produced more than 550 million tonnes of apatite concentrate
- More than 540 million tonnes of nepheline concentrate

Longitudinal Section of the Khibiny Deposits



Mining, Production and the Content of P₂O₅ in the Ore in 1975-2003



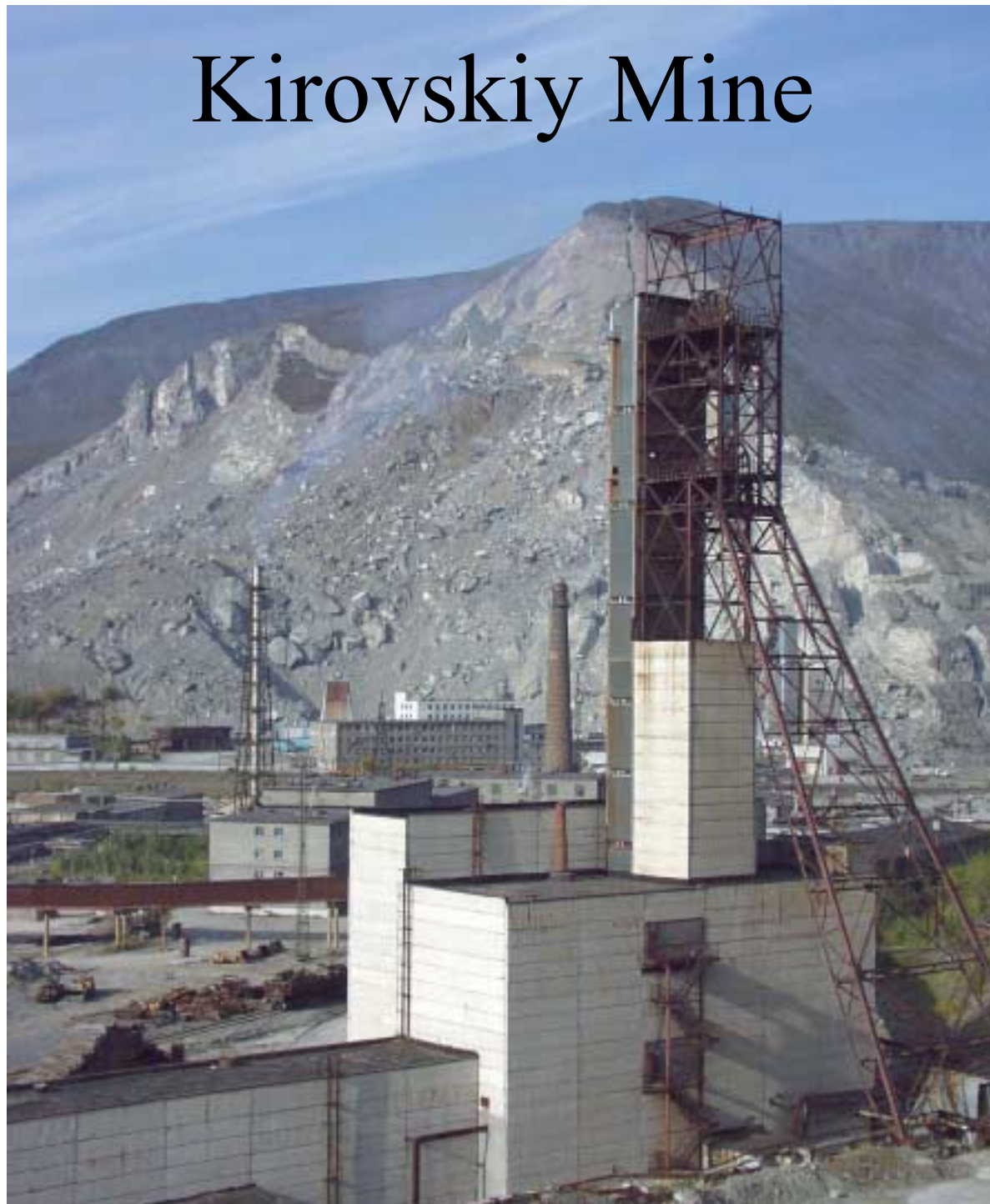
Central Mine



The Extraction of Ore at the “Vostochniy” Mine



Kirovskiy Mine



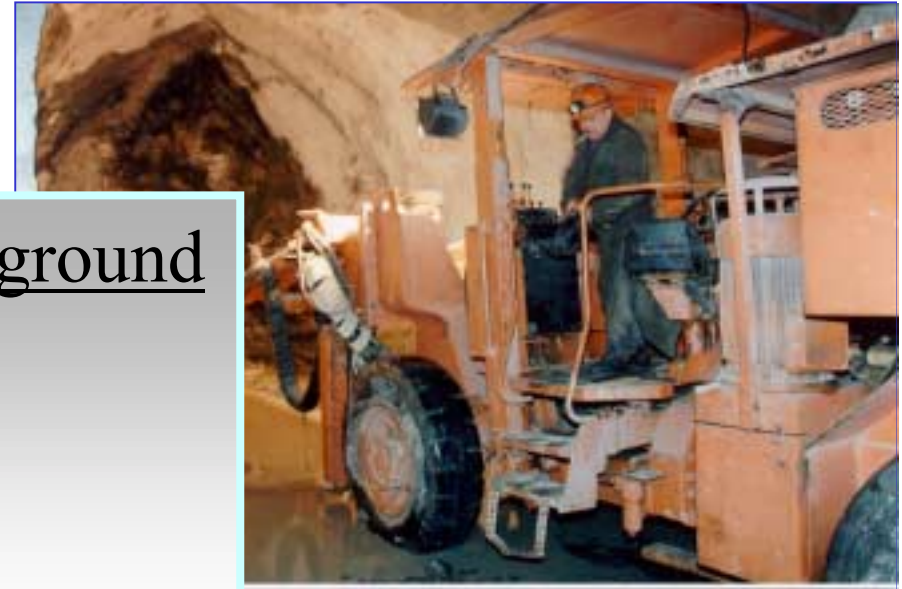
Gradual increase of underground extraction

The share of underground
mining:

in 2001 – 38 %,

in 2005 – 50 %,

in 2015 – 75 %



The Processing Complexes



Production of the Apatite Concentrate



The Opening of the New Mining Complex for 3 million tonnes of Ore



Kovdor Mining Processing Complex

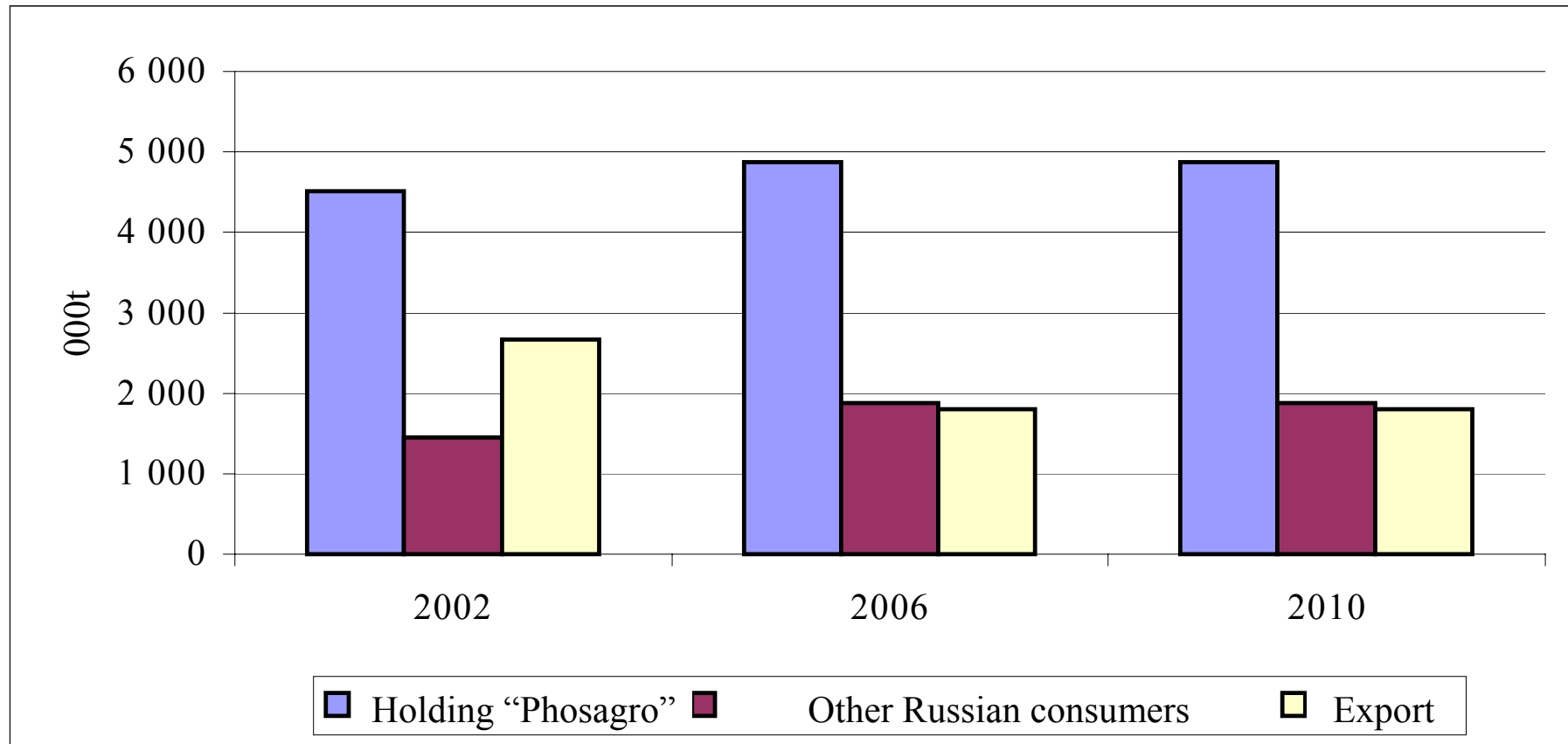


The Dynamics of the Sales of Apatite Concentrate Produced by the JSC “Apatit”

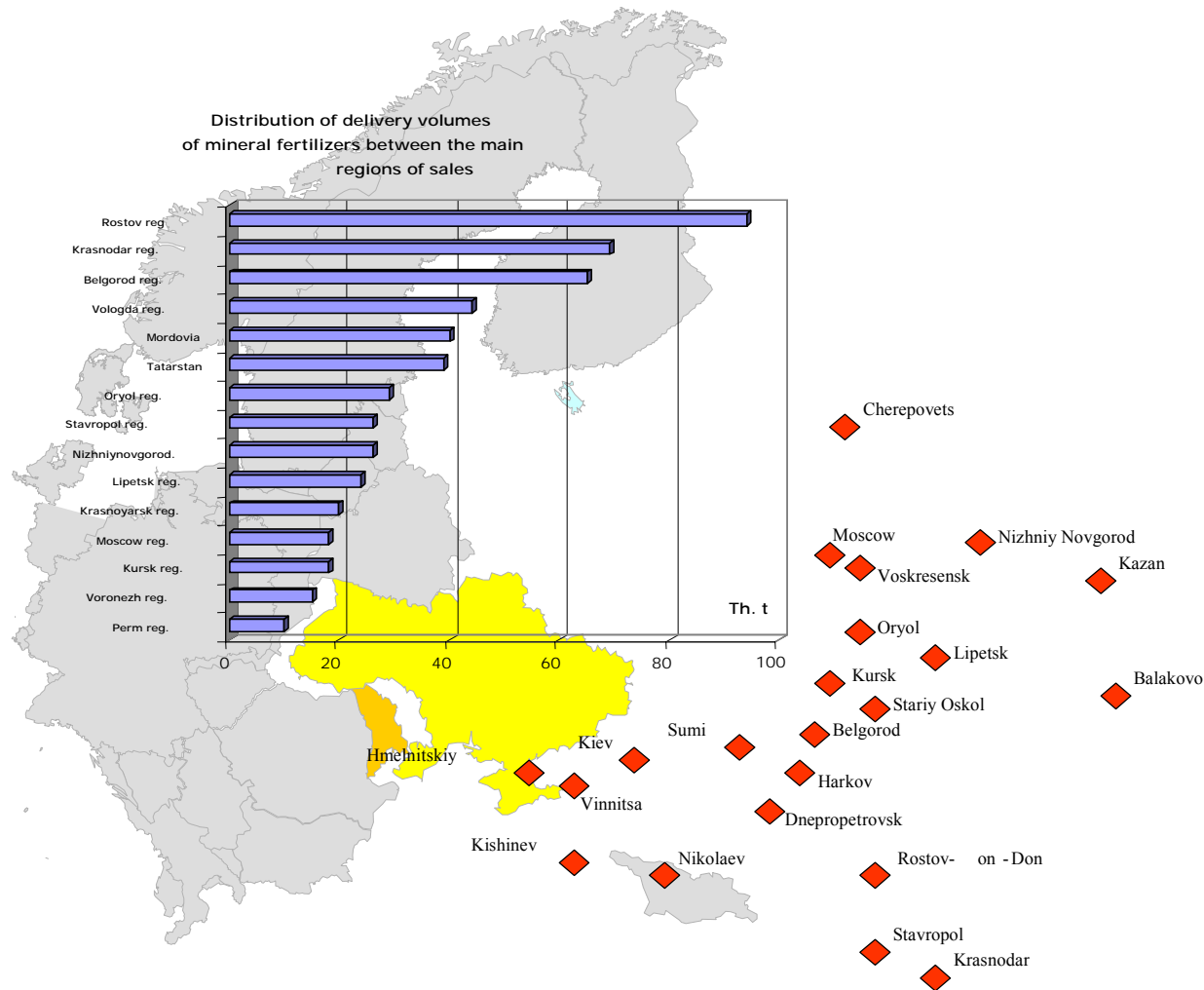
‘000 tonnes of concentrate

N	Consumers	1990	1995	2000	2001	2002	2005 plan
	Total:	19 305	7 461	9 101	8 402	8 629	8 550
1	Russia	9 447	4 819	5 906	6 138	6 153	6 750
1.1	JSC”Ammophos”, Cherepovets	1 789	1 738	1 886	2 256	2 464	2 580
1.2	JSC “VMU”, Voskresensk	1 179	792	999	1 068	1 004	1 100
1.3	PLC "BMU", Balakovo	1 059	698	913	1 035	1 044	1 170
1.4	JSC “Akron”, Novgorod	331	397	422	496	493	500
1.5	JSC “Minudobreniya”, Rossosh	270	105	324	373	352	415
1.6	ЈСЦ “КССС”, Кірово-	398	156	293	257	256	310
1.7	ЈСЦ “Дорогобузх	269	238	228	236	239	250
1.8	JSC “HMP”, Lermontov	115	7	66	121	124	130
1.9	Others	4 038	689	776	295	178	295
2	Ukrain	3 238	878	57	4		
3	Belarus	667	168	244	235	221	250
4	Kazahstan:	2 200	38	0	0	0	0
5	Baltic States	741	412	750	0	196	0
6	Azerbaidzhan:	485					
7	Export to other states	2 528	1 145	2 421	2 026	2 254	1 550

The Prognosis Dynamics of the Apatite Concentrate Distribution till 2010



The System of Distribution of the “Phosagro” Holding Company in Russia and CIS



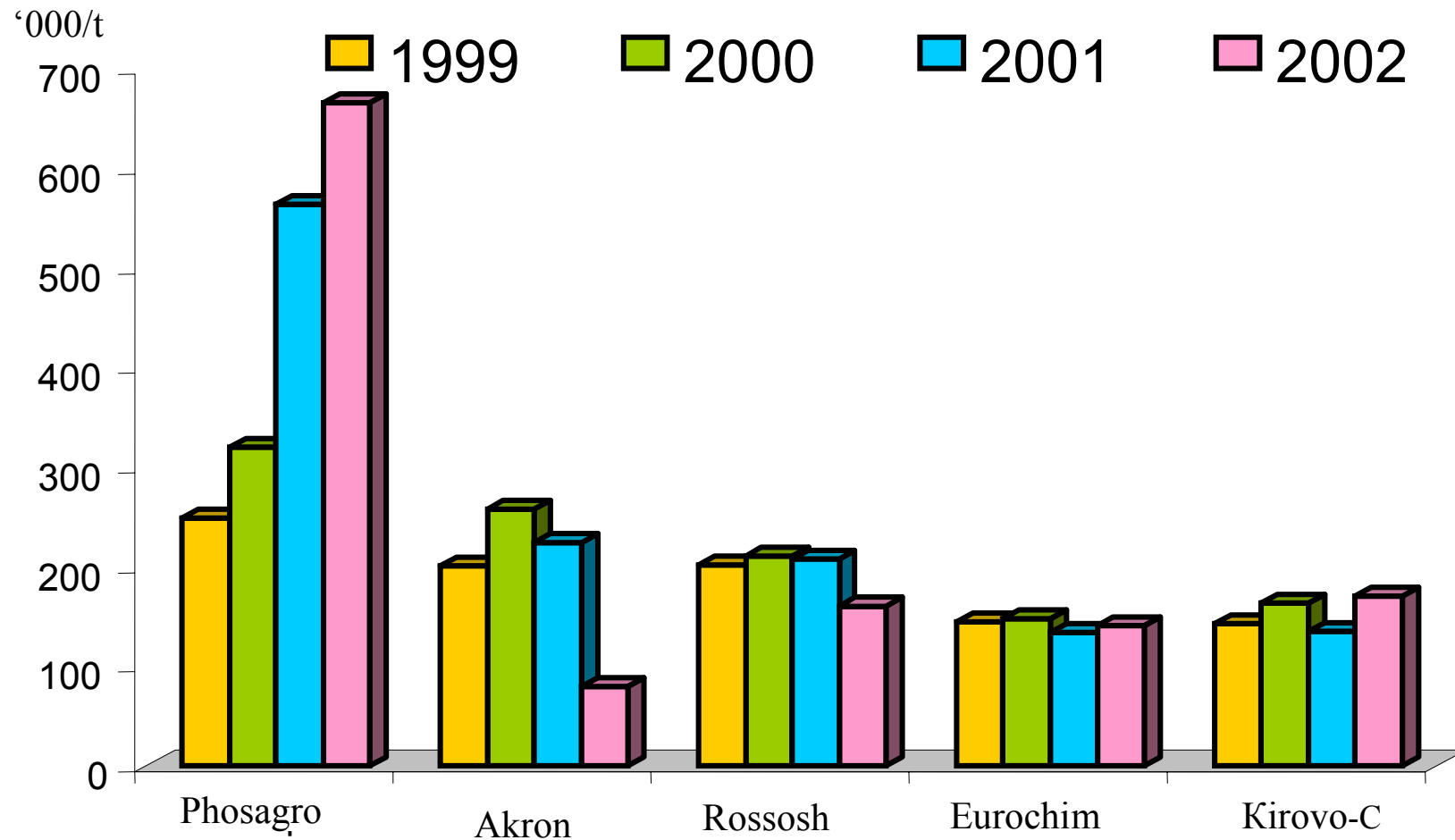
Regional agencies

In the “Phosagro” structure – above 20 regional agencies in Russia and CIS.

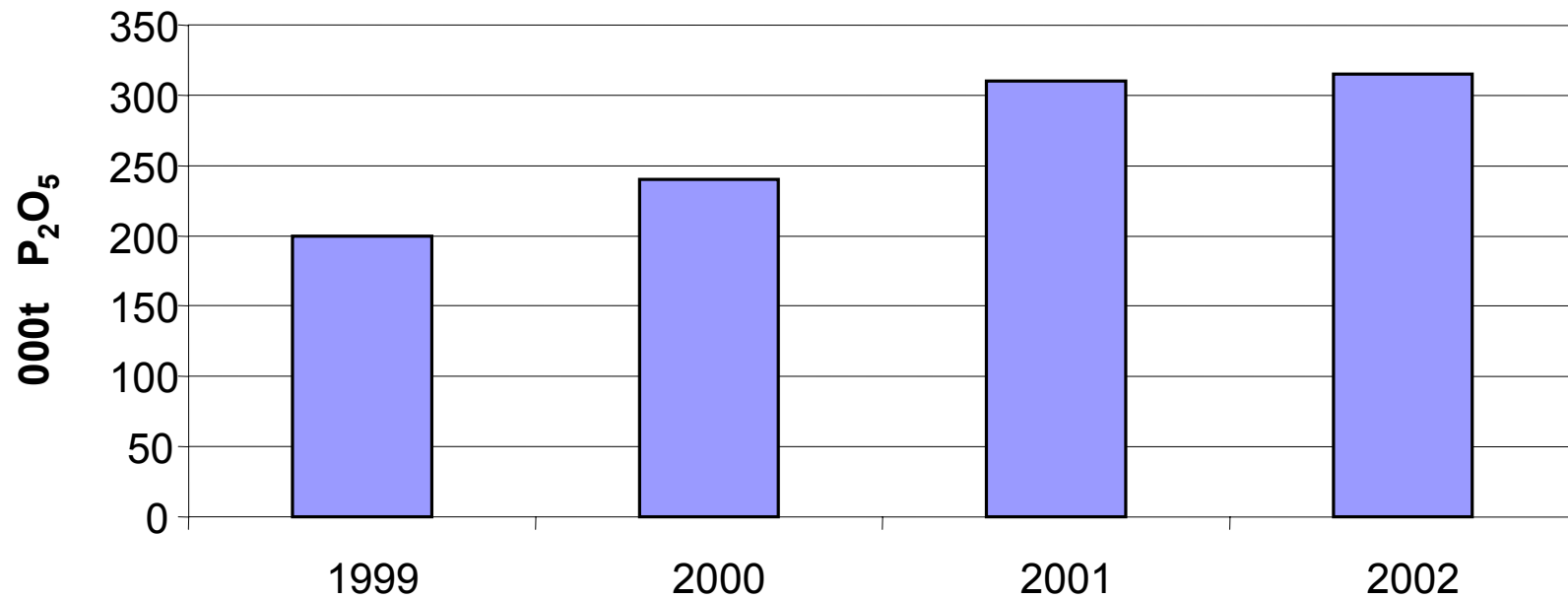
Storage CAPACITIES

Total storage capacities at the agricultural bases - above 230,000 t.

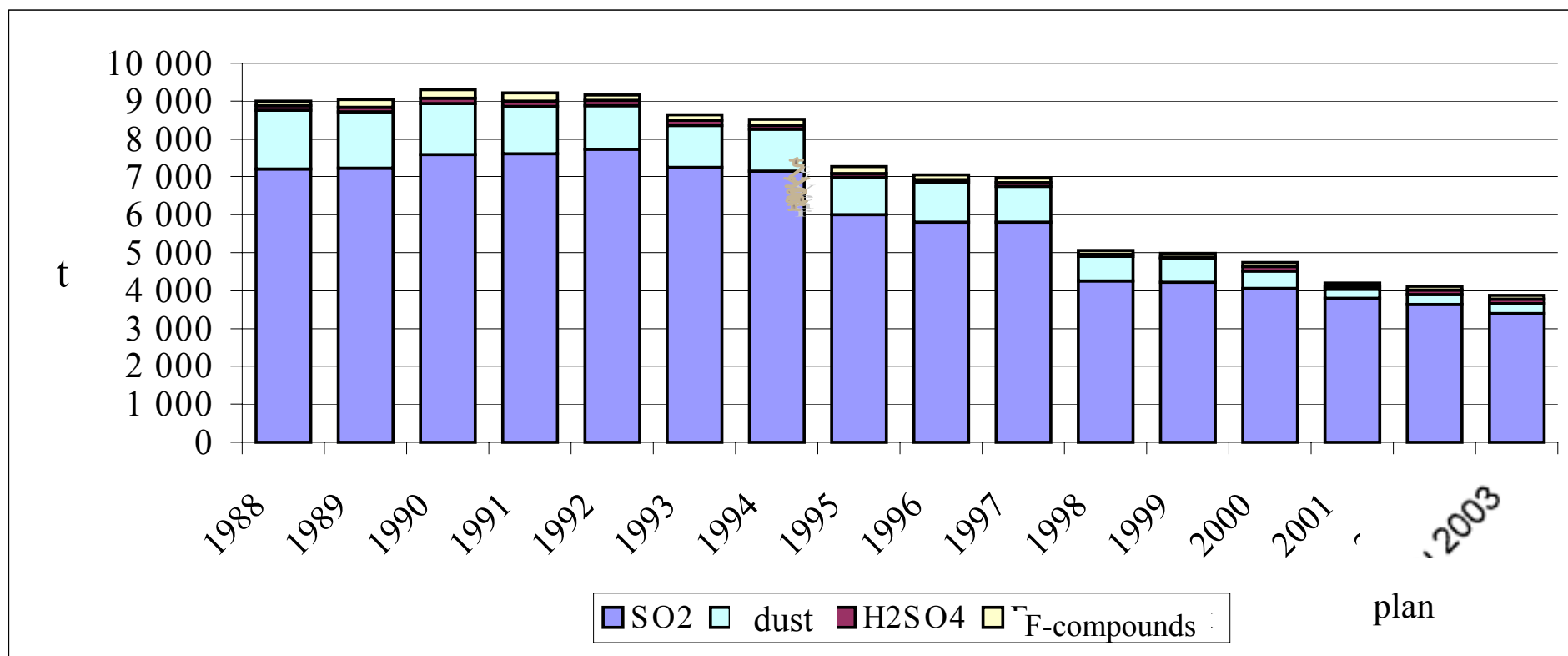
The Main Deliverers of Phosphorous Fertilizers to the Domestic Market



The Dynamics of Consumption of Agrochemical Phosphorous



The Dynamics of Emissions into Atmosphere in JSC “Ammophos” (Cherepovets)



The Accordance of Actual Specific Emissions of Contaminating Substances to the Best Available Technology Worked out by EFMA

№	Name of the enterprise	H ₂ SO ₄ , kg/t		NH ₃ , kg/t		HF, g/t P ₂ O ₅		DUST, kg/t	
		fact	EFMA	fact	EFMA	fact	EFMA	fact	EFMA
1	BMU	0.09	0.1	0.02	0.2	81	40	0.14	0.2
2	VMU	0.06	0.1	0.09	0.2	50	40	0.14	0.2
3	Ammophos	0.11	0.2	0.10	0.2	41	40	0.12	0.2