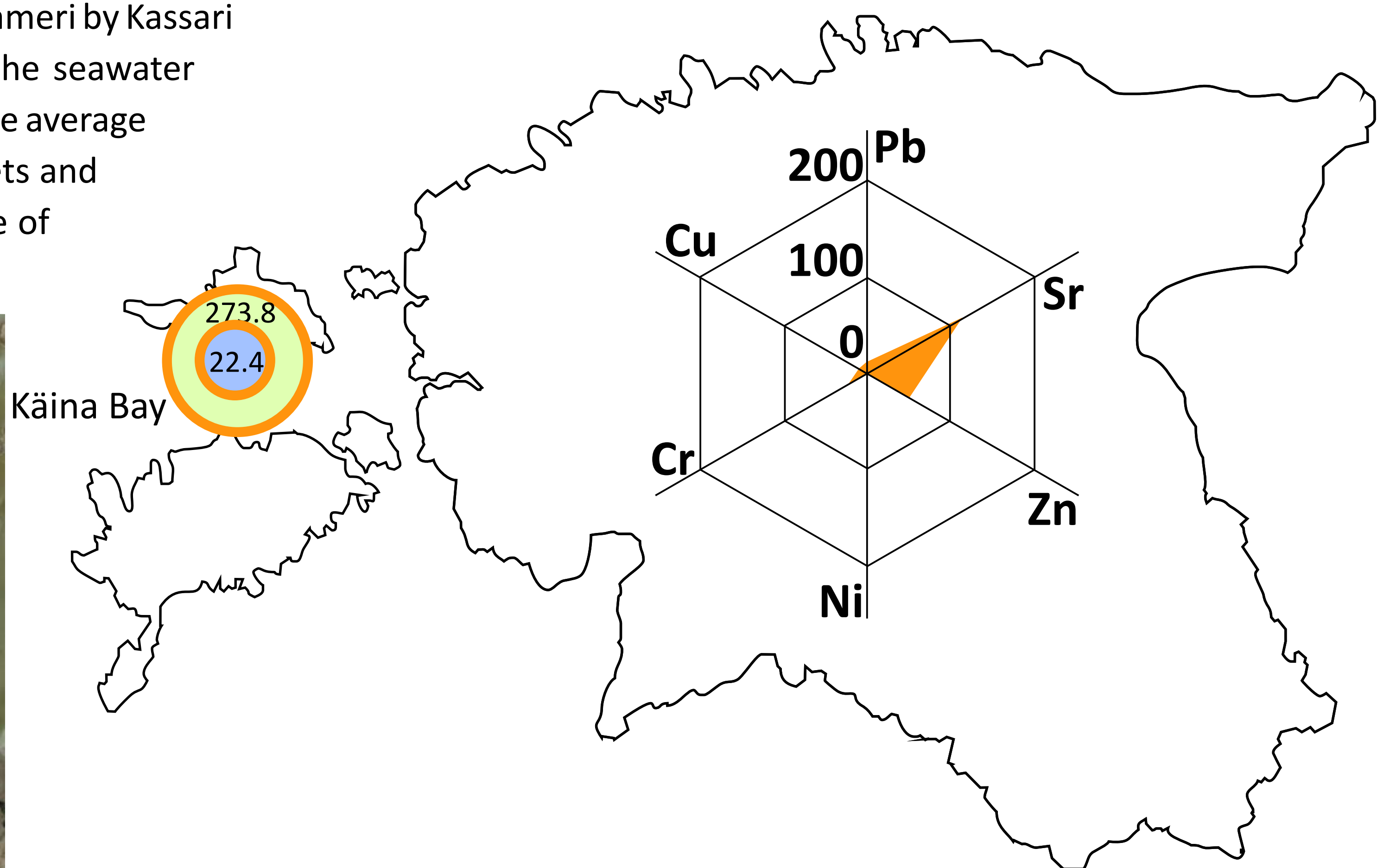
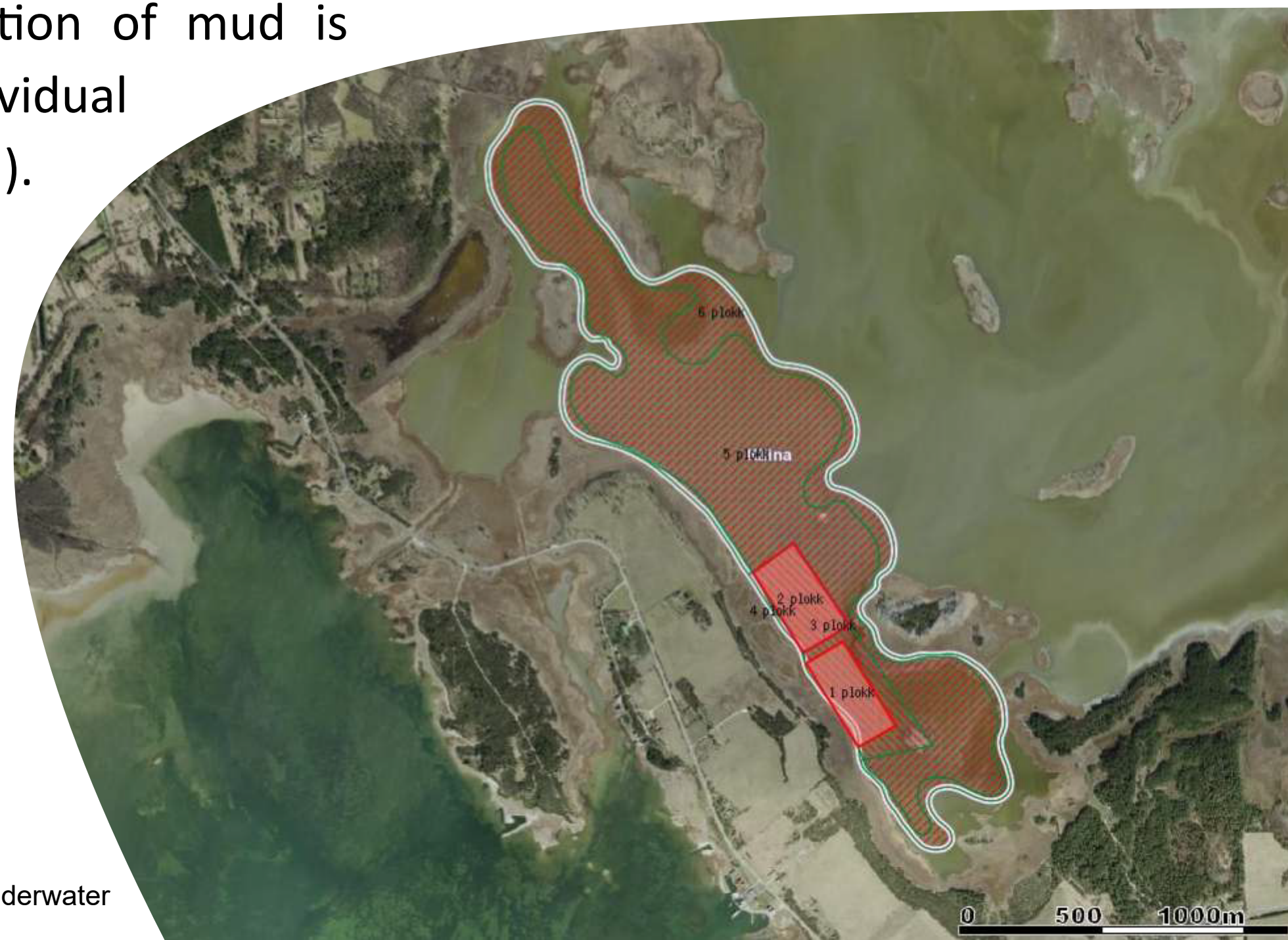


Curative mud in Estonia 2013-2014: Käina Bay

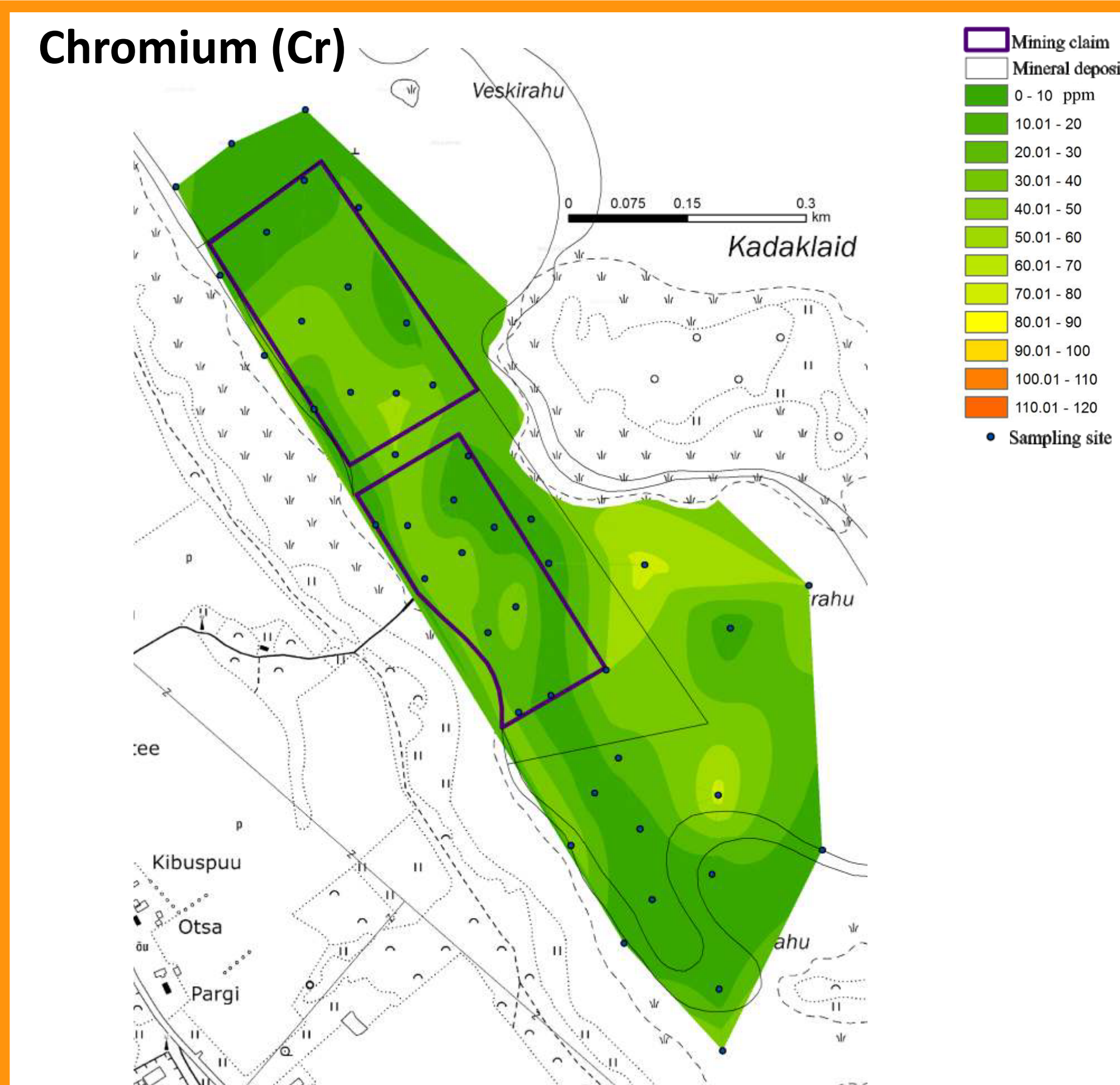
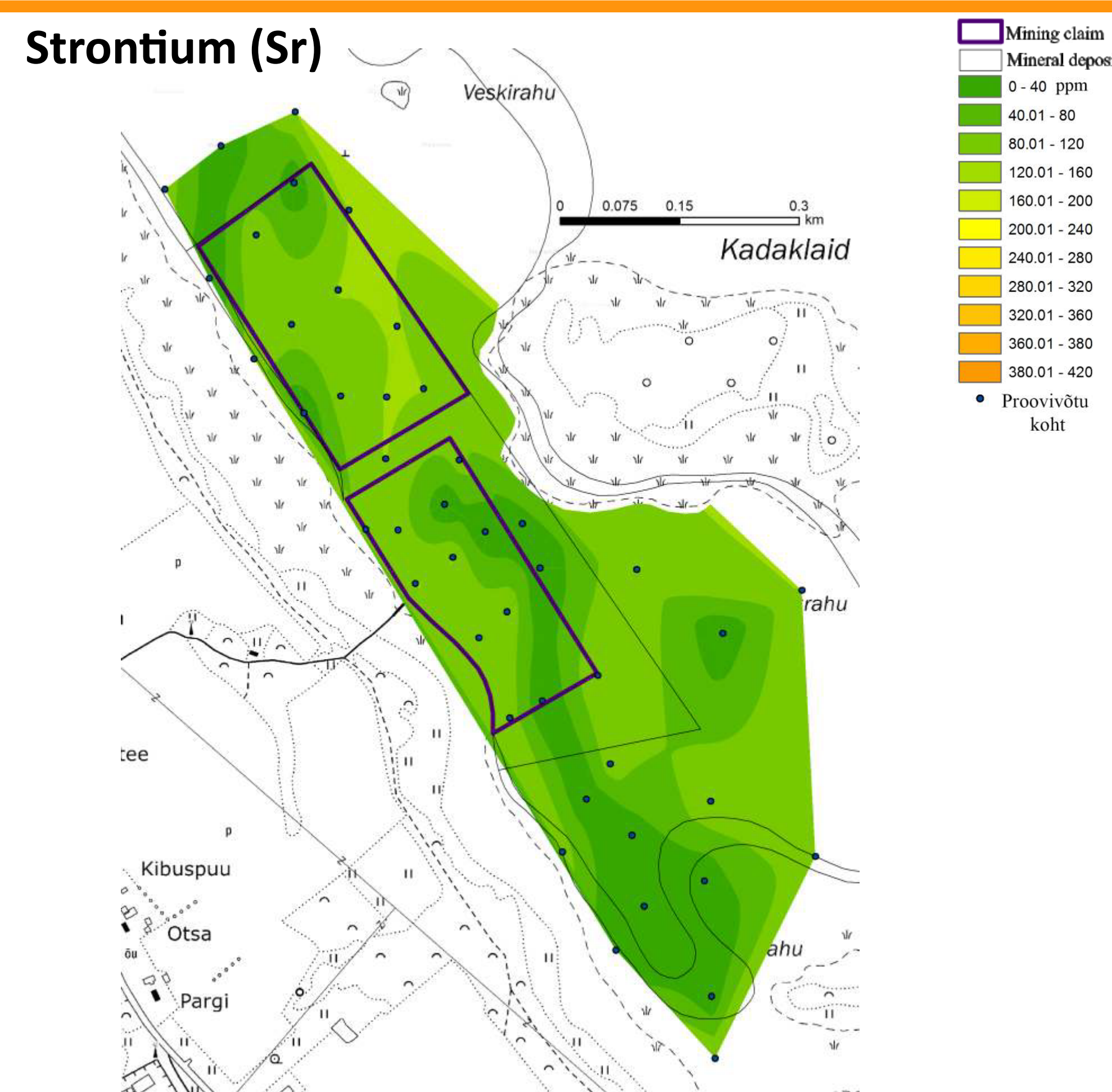
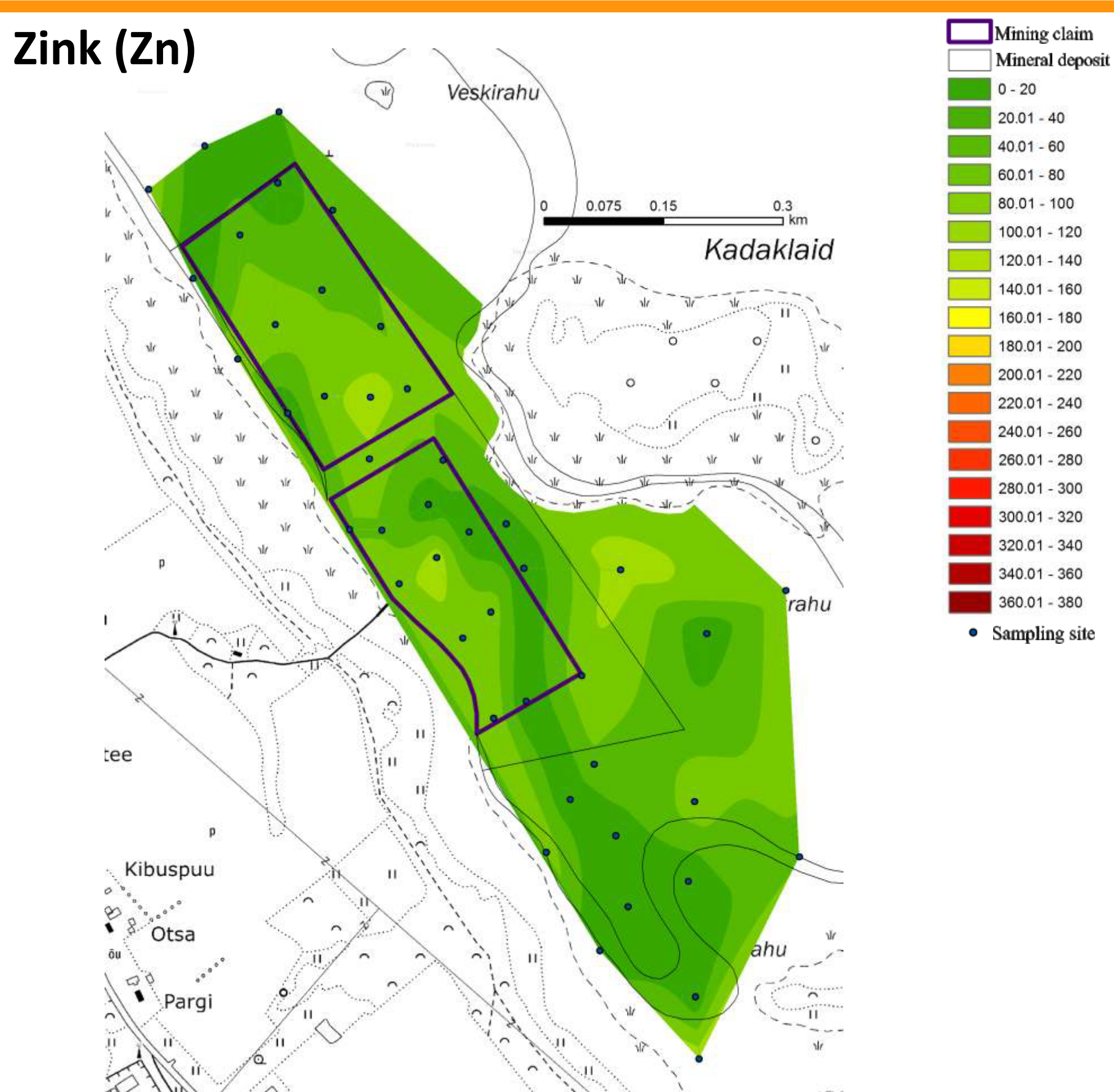
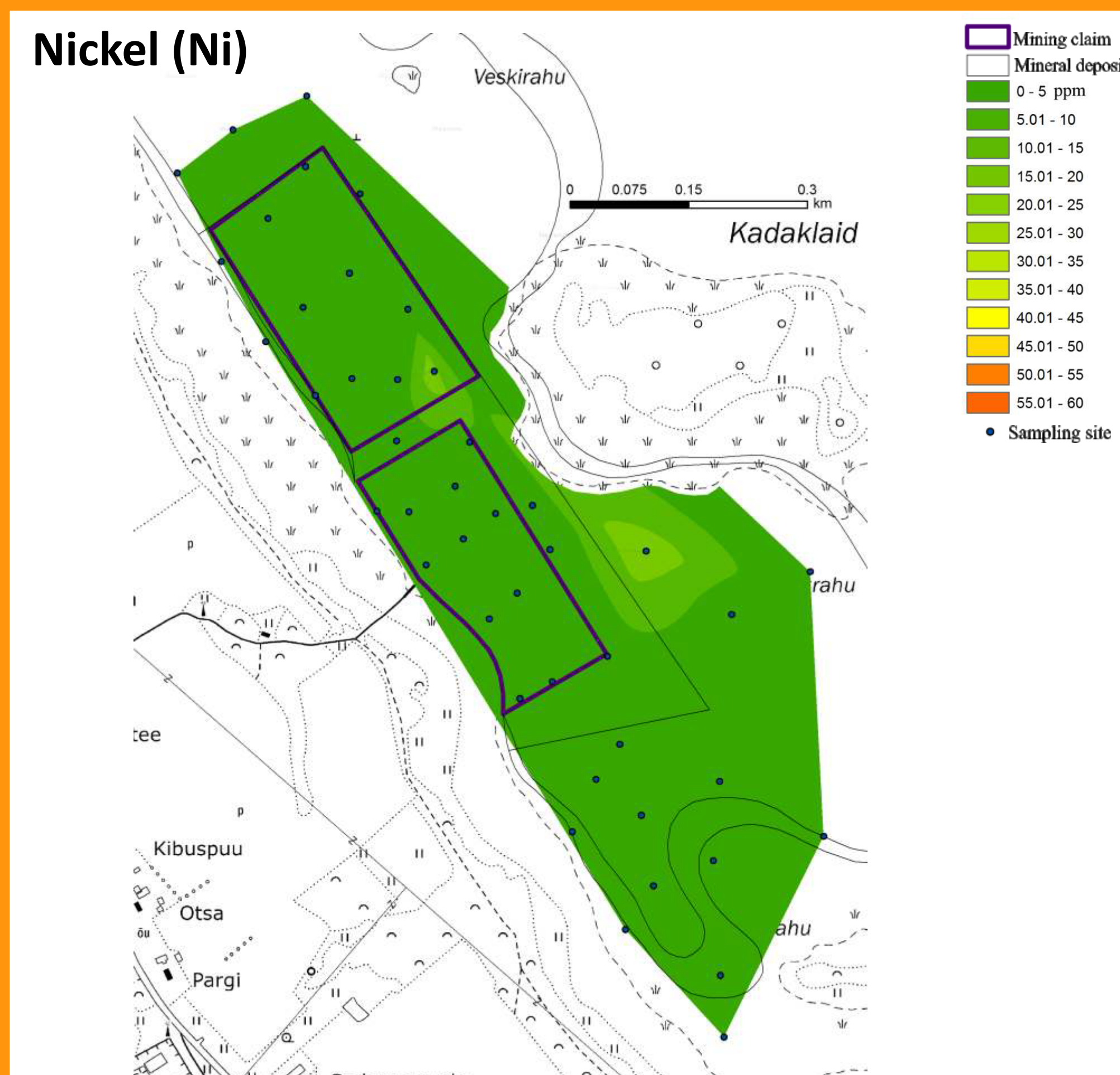
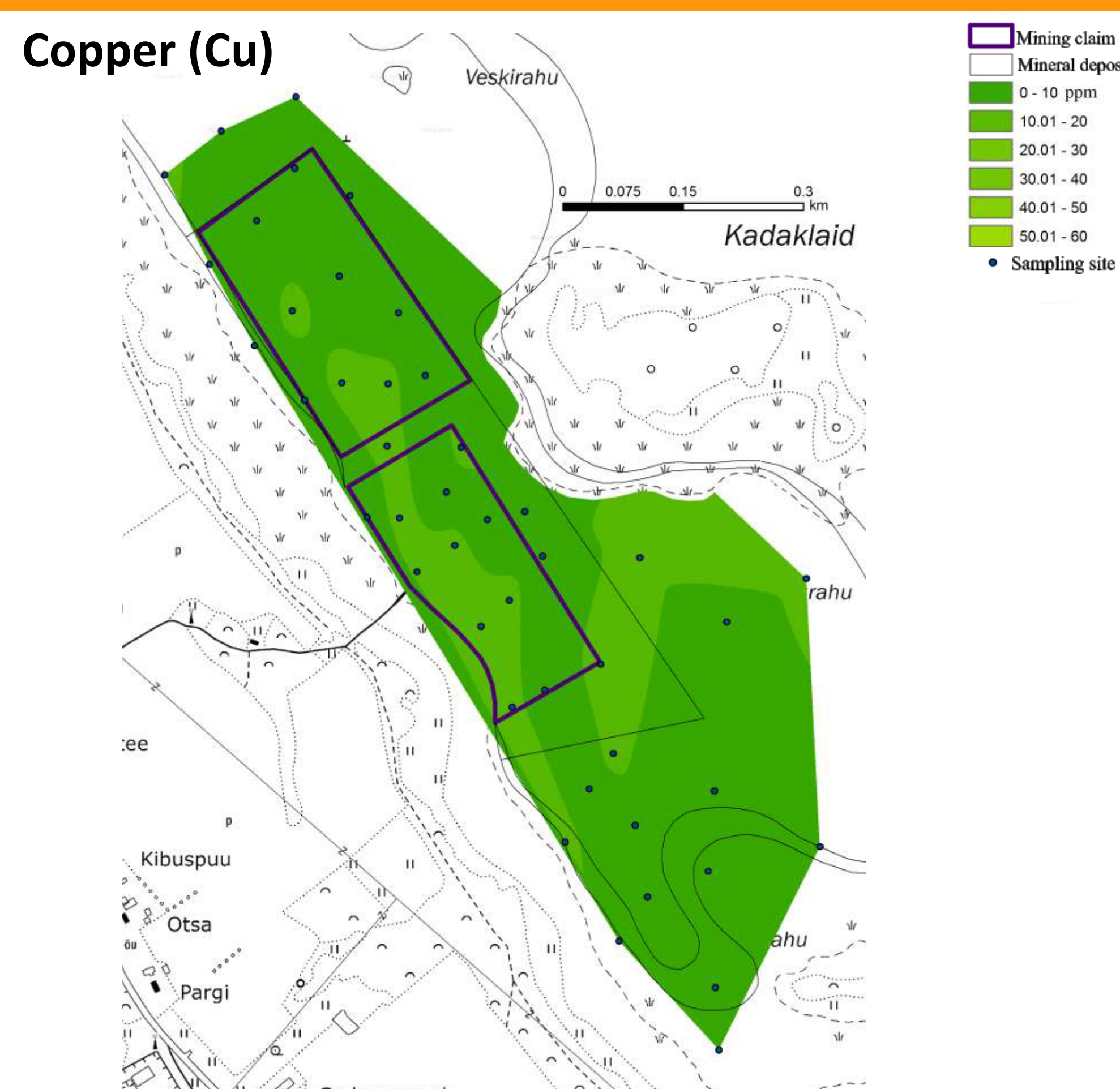
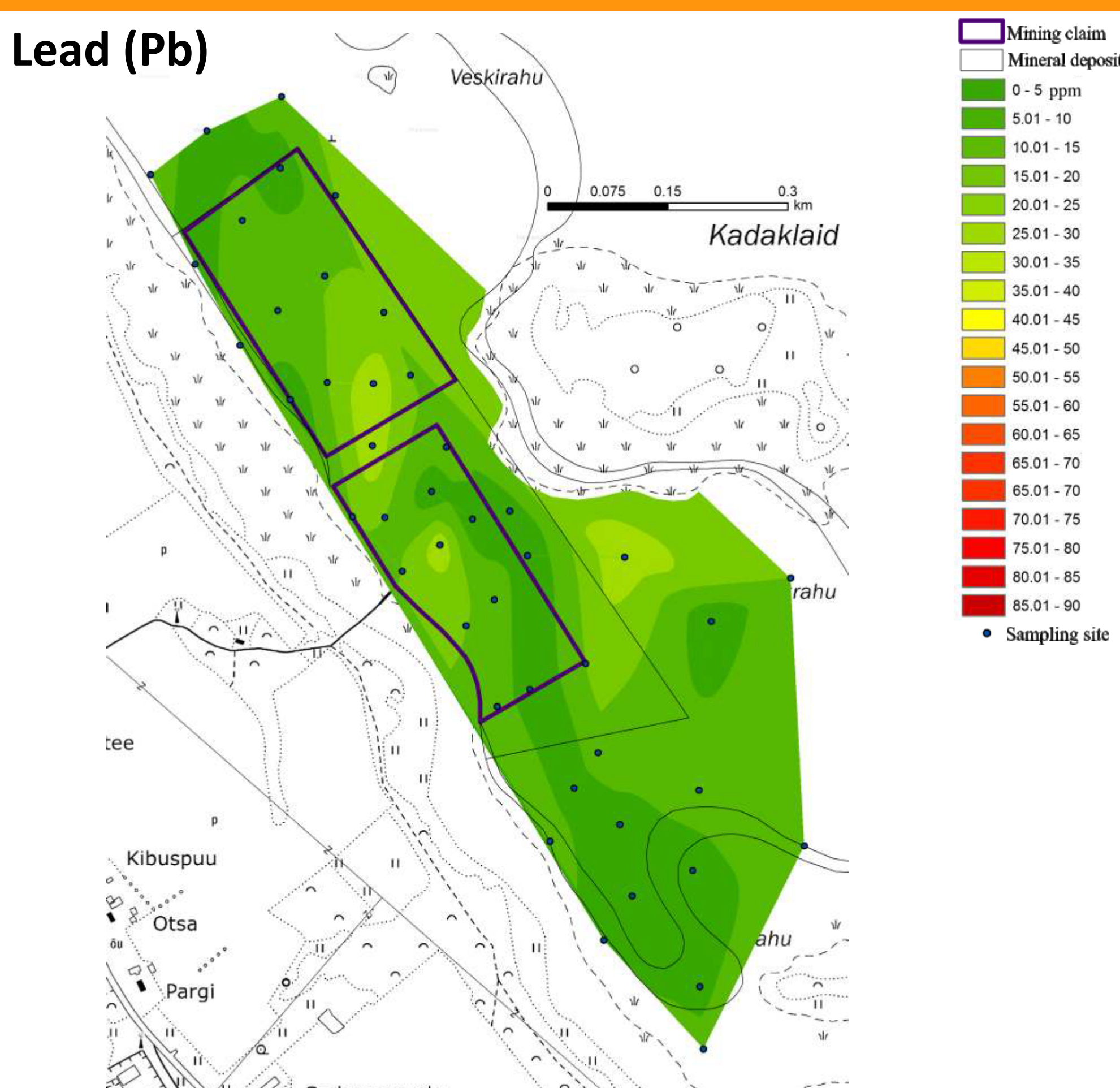
Jaanus Terasmaa, Galina Kapanen, Agata Marzecova, Sander Rautam

Käina Bay is a low bay in the south-east of Hiiumaa Island, which is separated from Väinameri by Kassari Island. The connection with the sea passes through the bridgeways of the dam, the seawater exchange is minimal (water salinity is 2-3 ‰). The area of Käina Bay is 900 hectares, the average depth is 0.3-0.5 m and the maximum depth is up to 1 meter. There are numerous small islets and reed-beds. Käina Bay has the most mineral mud among curative mud deposits - an average of 92.4% of the sediment is mineral, the organic content is 6.7% and the carbonate content is 0.9%. The lithological composition of mud is statistically connected to individual heavy metals (lead (Pb), zinc (Zn)). Concentrations of heavy metals are the lowest and below the limit values. Compared to the 1990s, Käina Bay mud has become slightly more organic (4.8% → 6.7%).

- / Mining claim
- / Mine service plot
- / Lake mud
- / Sea mud
- / Economic reserves underwater
- / Potentially economic reserves underwater
- / Reconnaissance resources



Surface area (ha) and volume (in 1000 tons) of economic proved reserves of curative mud.



Mud composition

	Mineral matter (%)	Organic matter (%)	Carbonates (%)	Pb (PPM)	Cu (PPM)	Ni (PPM)	Zn (PPM)	Sr (PPM)	Cr (PPM)	Zr (PPM)	Al (%)	Ca (%)	Fe (%)	K (%)	Mg (%)	Cl (mg/g)	P (mg/g)	S (mg/g)
Average	92.4	6.7	0.9	11.4	9.1	1.0	50.8	114	21.6	340	3.0	0.8	1.6	2.9	0.2	3.4	2.8	0.9
Minimum	88.9	3.1	0.4	10.0	0.0	0.0	18.5	104	0.0	265	2.4	0.7	0.8	2.4	0.0	1.5	2.6	0.0
First quartile	91.8	6.0	0.8	10.0	0.0	0.0	36.9	104	15.1	298	2.8	0.8	1.3	2.8	0.1	2.8	2.7	0.0
Median	92.4	6.7	0.9	10.0	14.9	0.0	55.4	121	30.2	339	3.0	0.8	1.7	3.0	0.2	3.2	2.8	1.0
Third quartile	93.0	7.4	1.1	10.0	14.9	0.0	55.4	121	30.2	352	3.3	0.8	1.9	3.1	0.2	4.3	2.8	1.5
Maximum	96.5	9.9	1.3	20.0	14.9	14.3	73.9	121	45.3	480	3.8	1.2	2.6	3.2	0.4	5.5	2.9	2.0

Lithological composition

