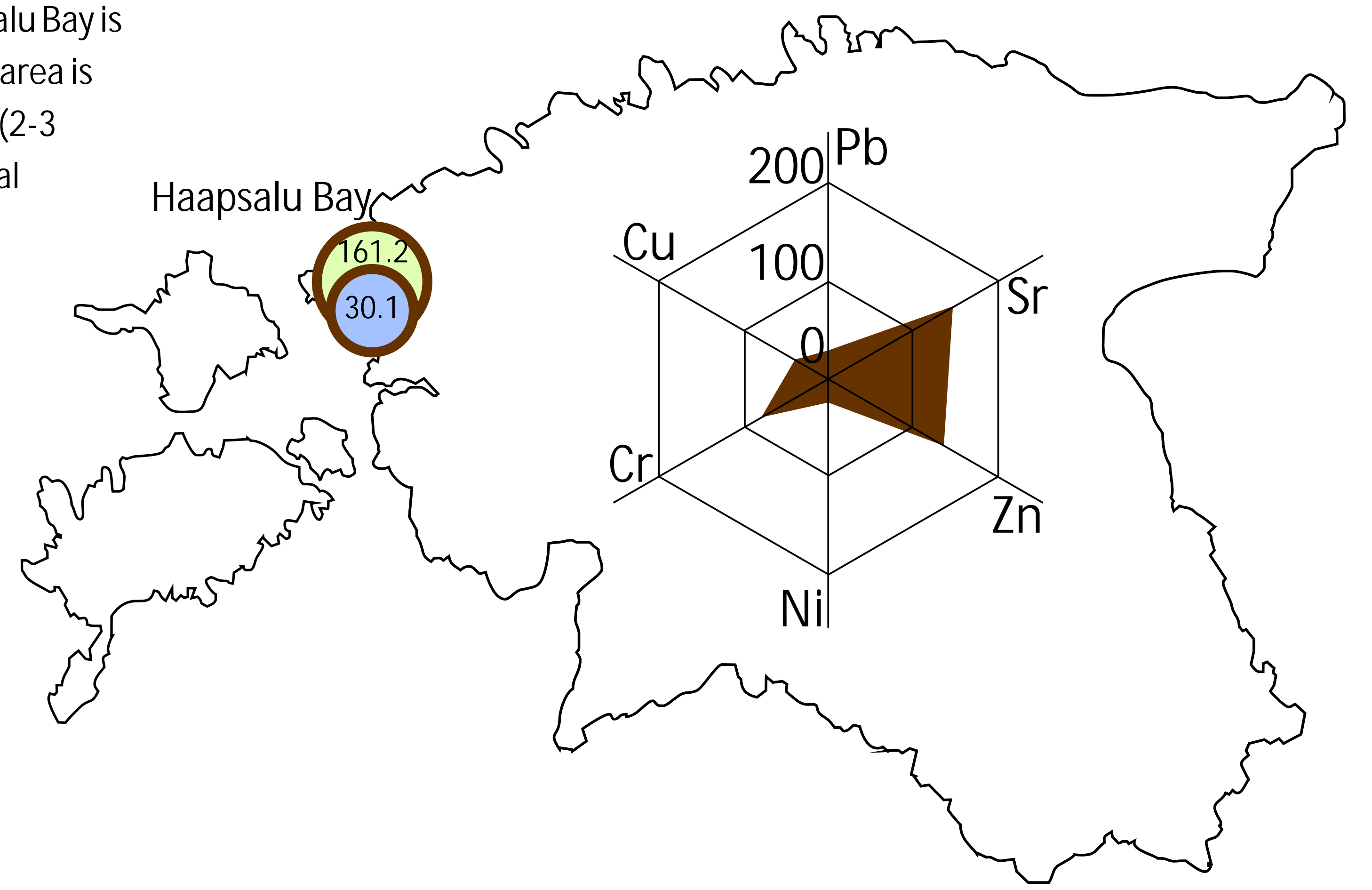


Curative mud in Estonia 2013-2014: Haapsalu Tagalaht Bay

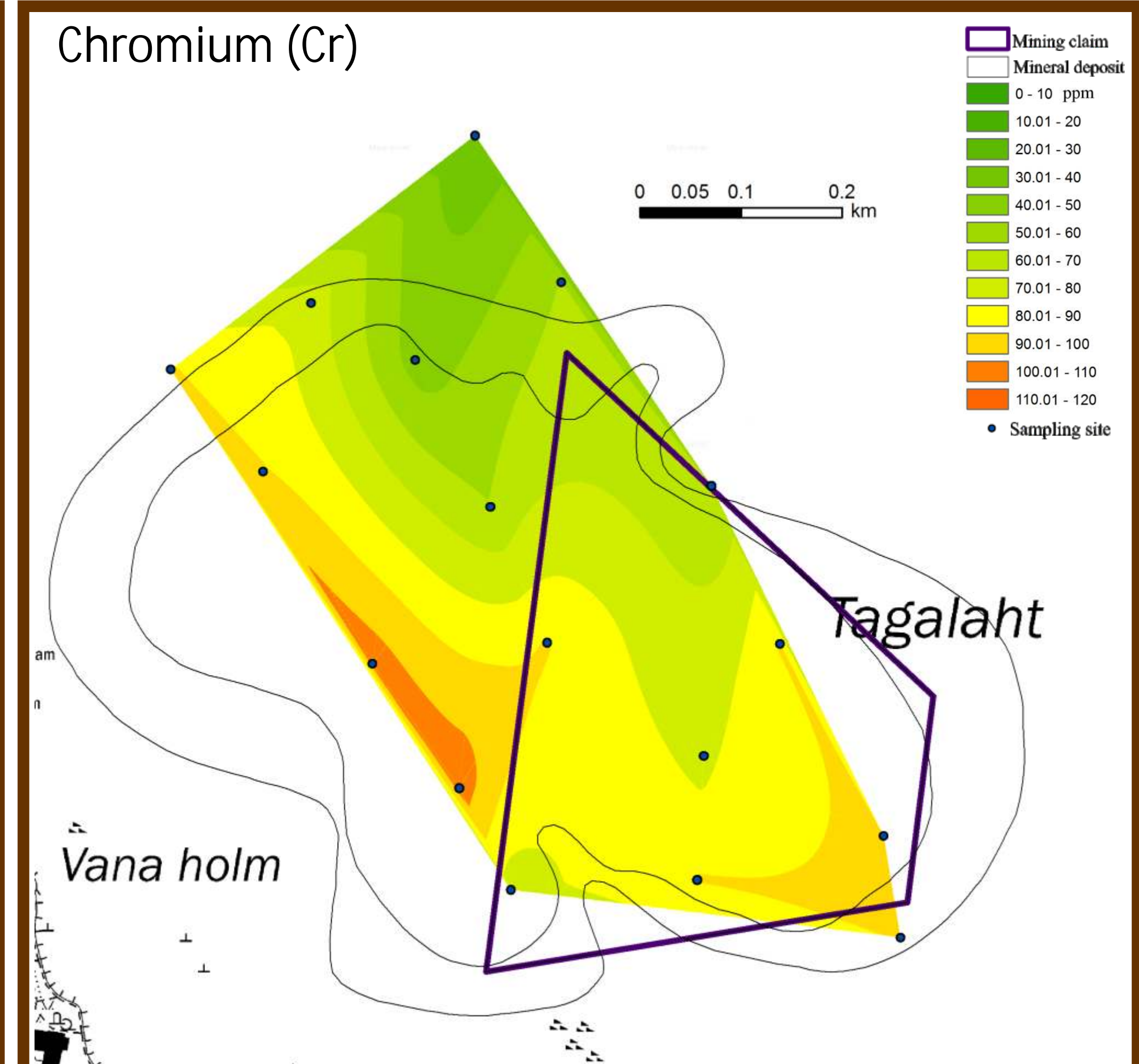
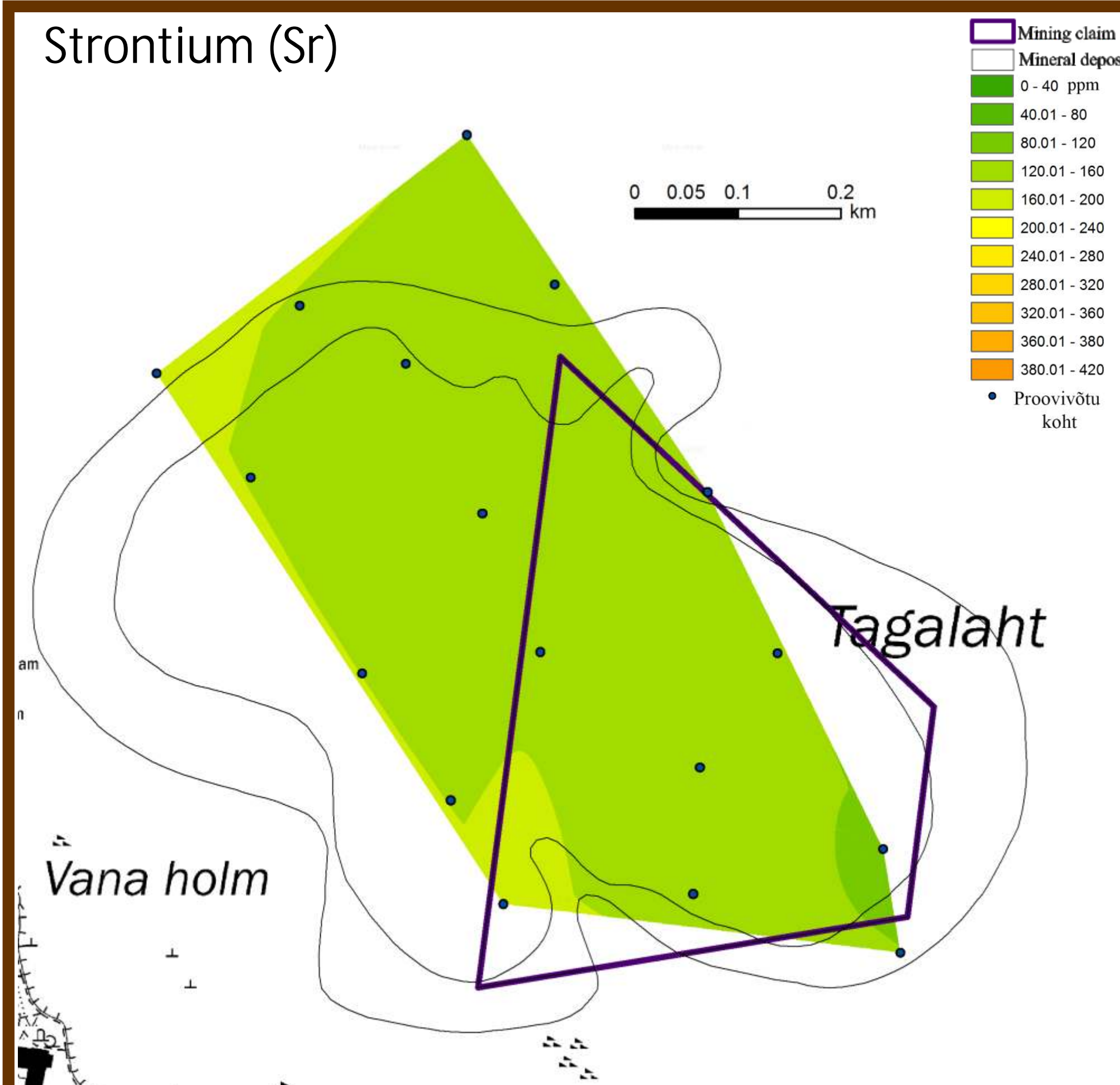
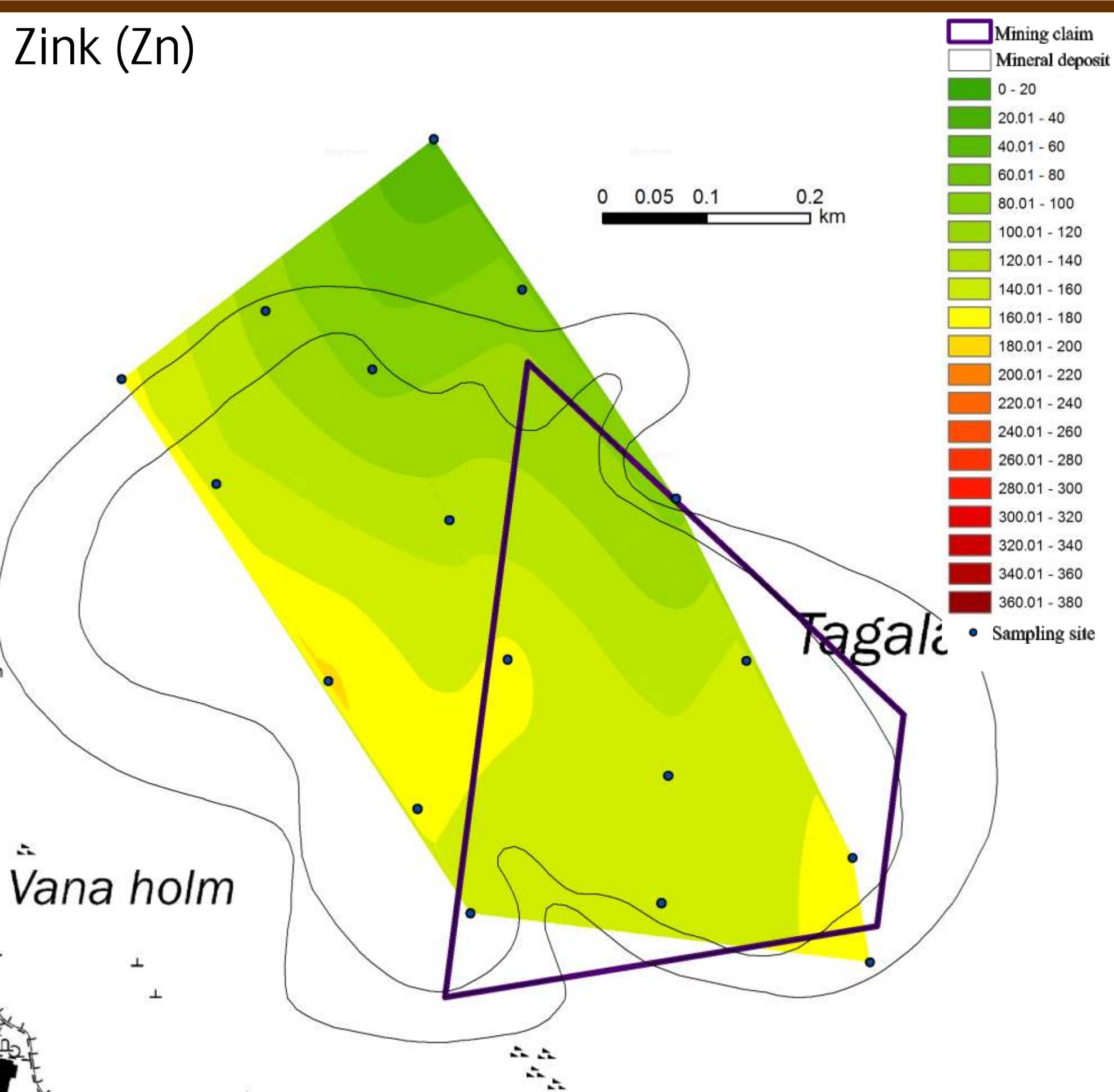
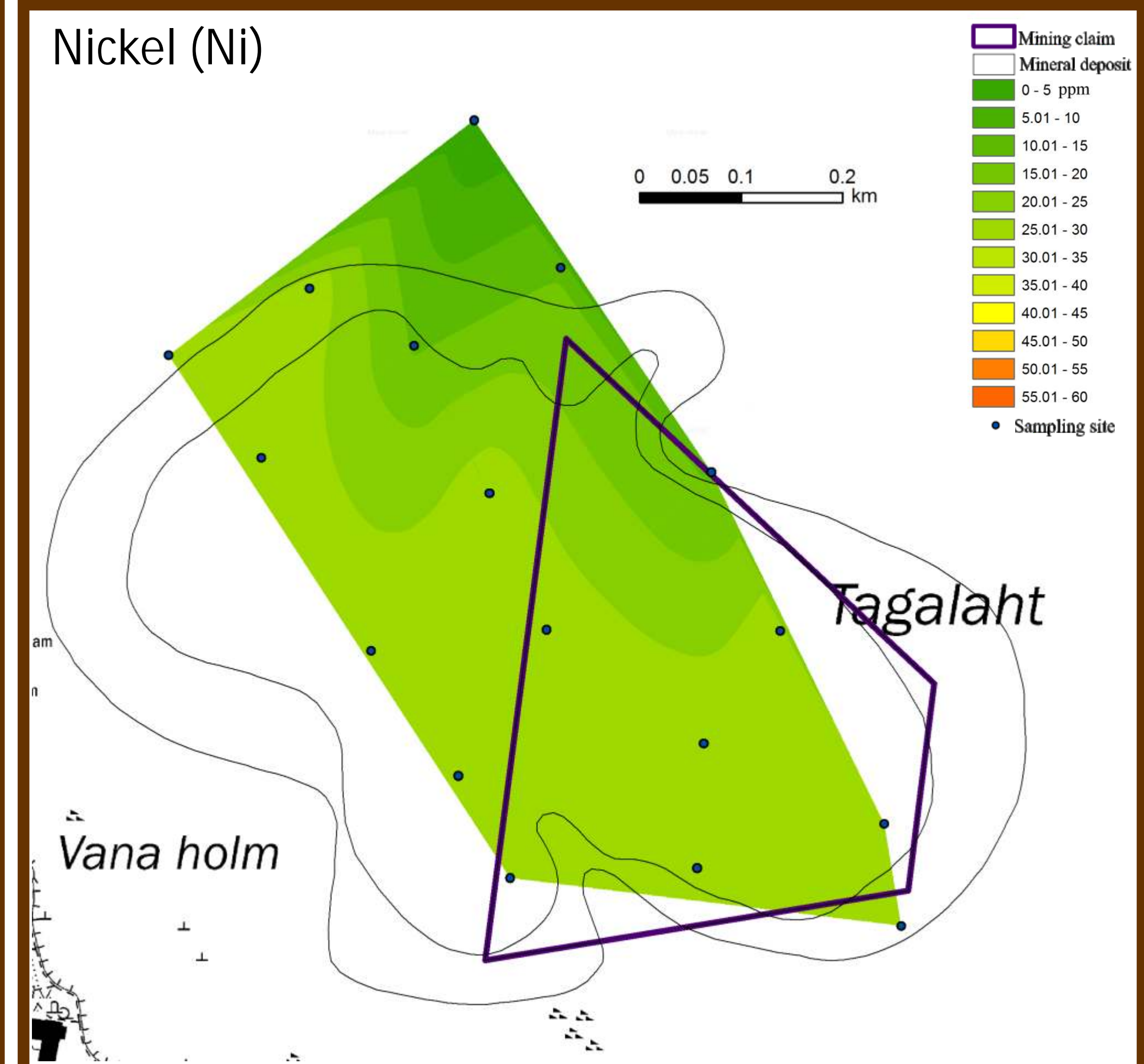
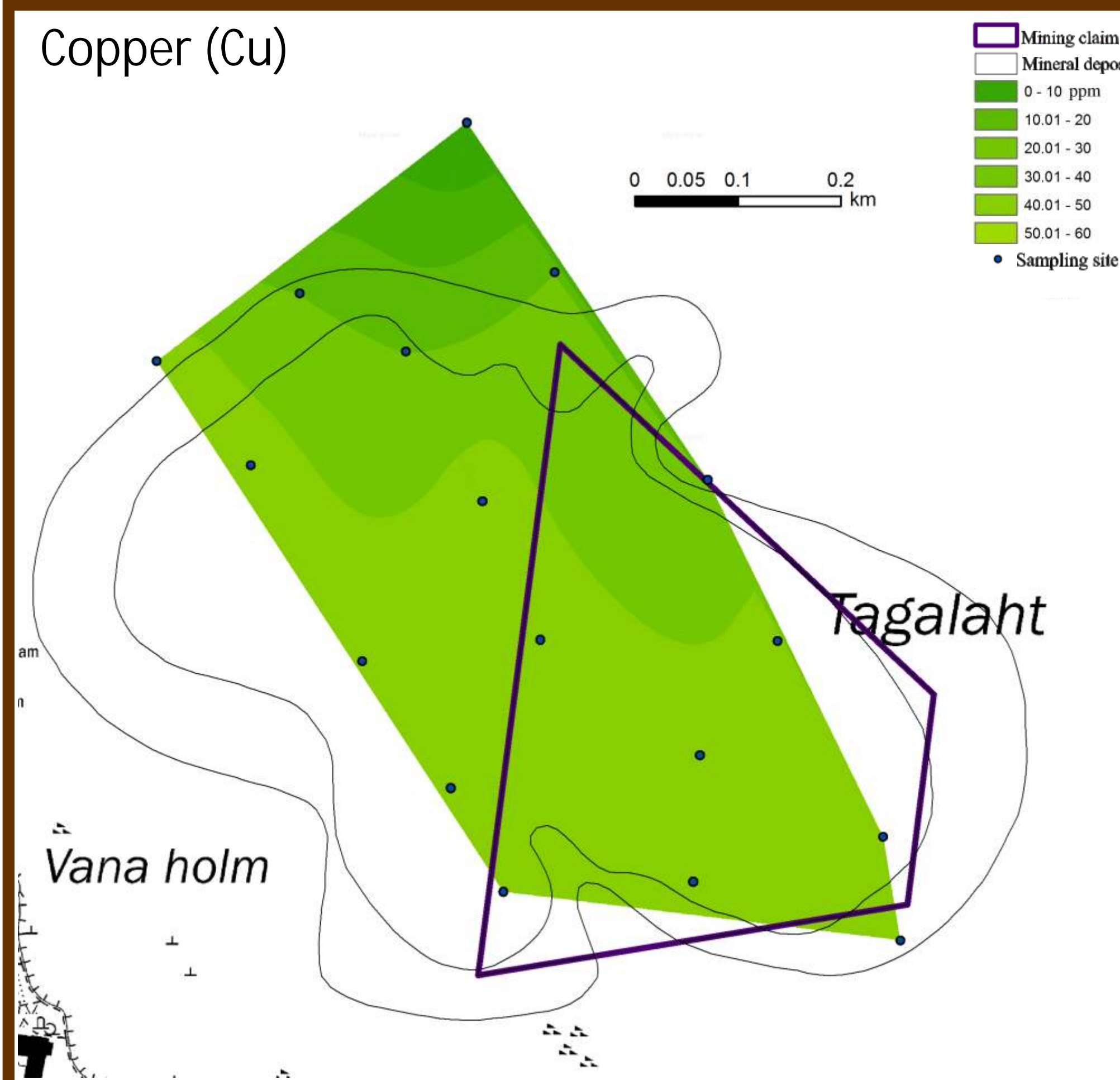
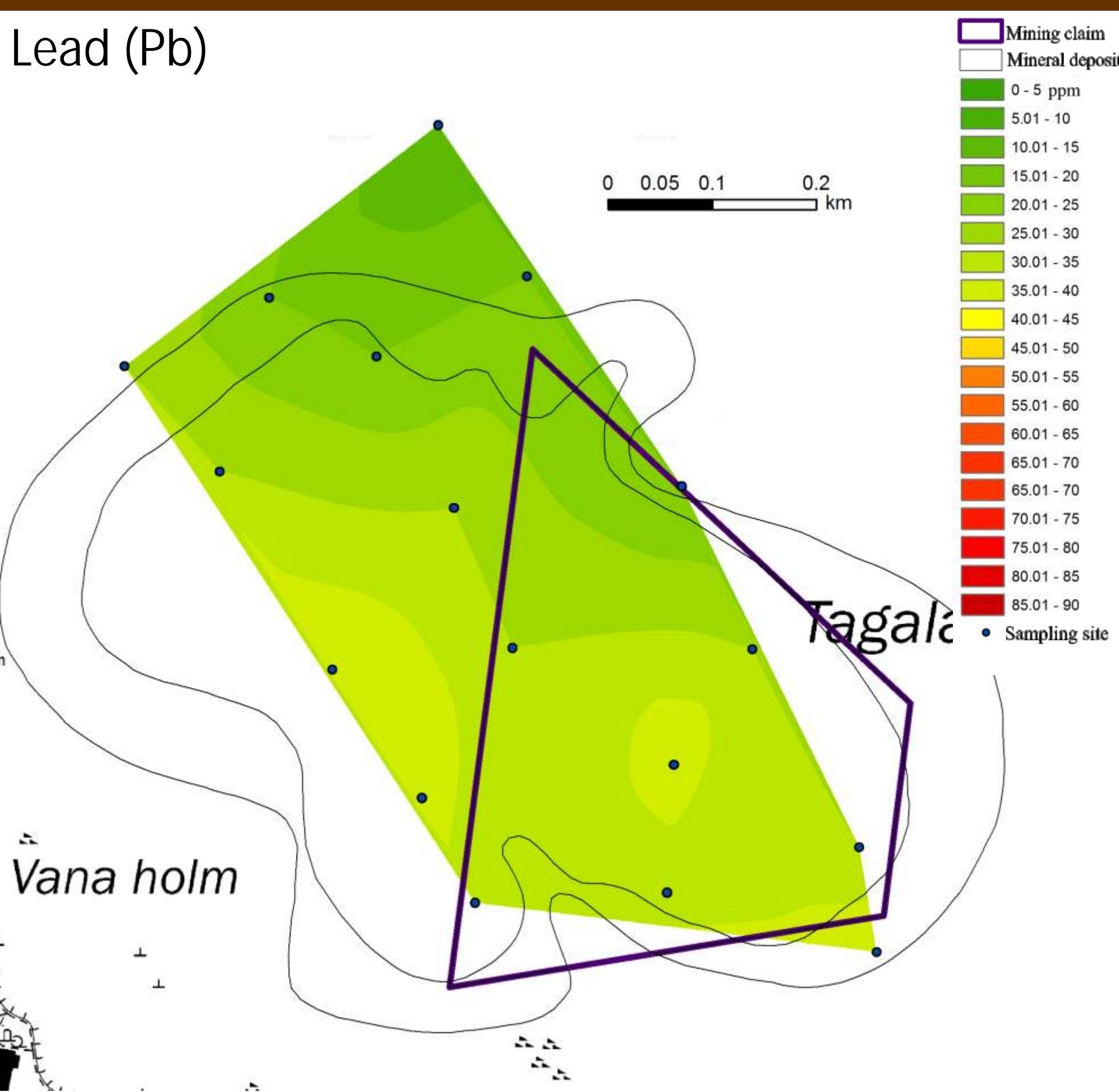
Jaanus Terasmaa, Galina Kapanen, Agata Marzecova, Sander Rautam

Haapsalu Tagalaht Bay is the northeastern part of Haapsalu Bay located in Väinameri Sea. Haapsalu Bay is connected with Saunja and Tahu bays, there are also several streams flowing into the bay. The area is over 800 ha, the average depth 0.5-1 m, maximum depth 2 m. Due to the neotectonic uplift (2-3 mm/yr), the bay is gradually getting shallower. Because of high internal load of nutrients, the ecological state of the bay is deteriorating. The curative mud of Tagalaht Bay is very mineral - on average 87.8%, organic matter content is on average 10.9% and carbonate content 1.3%. All heavy metals other than strontium (Sr) are statistically significantly connected with sediment lithological content. Heavy metal content is within the limit values of regulations. During the last 20 years the highest increase in organic matter has occurred in Tagalaht Bay, where the previously measured maximum value (9.2%) was lower than the current average value (10.9%).

- / 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	87.8	10.9	1.3	28.8	38.6	24.3	136	147	78.2	330	6.2	1.3	4.6	3.9	1.0	3.9	2.8	2.6
Minimum	83.5	3.3	0.4	10.0	0.0	0.0	36.9	104	30.2	281	4.6	1.1	1.6	3.0	0.6	2.2	2.5	0.0
First quartile	86.1	10.5	1.3	20.0	29.9	28.5	111	138	60.4	314	5.7	1.2	4.3	3.7	0.9	3.5	2.8	2.2
Median	87.4	11.3	1.4	30.0	44.8	28.5	148	156	90.7	348	6.2	1.3	4.9	4.0	1.0	3.7	2.8	2.8
Third quartile	88.2	12.5	1.5	30.0	44.8	28.5	166	156	90.7	348	6.6	1.4	5.4	4.1	1.1	4.1	2.9	3.1
Maximum	96.3	14.9	1.6	40.0	44.8	28.5	185	173	106	364	7.8	1.7	6.1	4.5	1.4	6.1	3.1	4.1

Lithological composition

