

## Kaustisen seutukunta

### Matkapuhelinverkkojen mittausten analyysi

20.10.2022 – mittatunti 3.



Euroopan maaseudun  
kehittämisen maatalousrahasto:  
Eurooppa investoi maaseutualueisiin



Mittaukset perustuvat kolmelta modeemilta saatuihin mittaustuloksiin. Jokaisella operaattorilla on oma modeemi. 5G tulokset (SS-RSRP, Band, Physical Cell ID) esitetään vain, jos siitä on havaittu mittadataa kyseiseltä ajanjaksolta.

Parametrien tarkasteluun voidaan käyttää oheisia taulukoita:

Lähde: <https://www.netvault.net.au/netmon-4g-signal-statistics-explained>

RSRP	Signal strength	Description
>= -80 dBm	Excellent	Strong signal with maximum data speeds
-80 dBm to -90 dBm	Good	Strong signal with good data speeds
-90 dBm to -100 dBm	Fair to poor	Reliable data speeds may be attained, but marginal data with drop-outs is possible. When this value gets close to -100, performance will drop drastically
<= -100 dBm	No signal	Disconnection

RSRQ	Signal quality	Description
>= -10 dB	Excellent	Strong signal with maximum data speeds
-10 dB to -15 dB	Good	Strong signal with good data speeds
-15 dB to -20 dB	Fair to poor	Reliable data speeds may be attained, but marginal data with drop-outs is possible. When this value gets close to -20, performance will drop drastically
<= -20 dB	No signal	Disconnection

SINR	Signal strength	Description
>= 20 dB	Excellent	Strong signal with maximum data speeds
13 dB to 20 dB	Good	Strong signal with good data speeds
0 dB to 13 dB	Fair to poor	Reliable data speeds may be attained, but marginal data with drop-outs is possible. When this value gets close to 0, performance will drop drastically
<= 0 dB	No signal	Disconnection

RSRP = Reference Signal Received Power

= tukiasemalta vastaanotetun signaalin teho

RSRQ = Reference Signal Received Quality

= tukiasemalta vastaanotetun signaalin laatu

SINR = Signal to Interference plus Noise Ratio

= signaali-kohinasuhde

Lisäksi esitetty:

Band = taajuusalue missä modeemi ollut kiinni

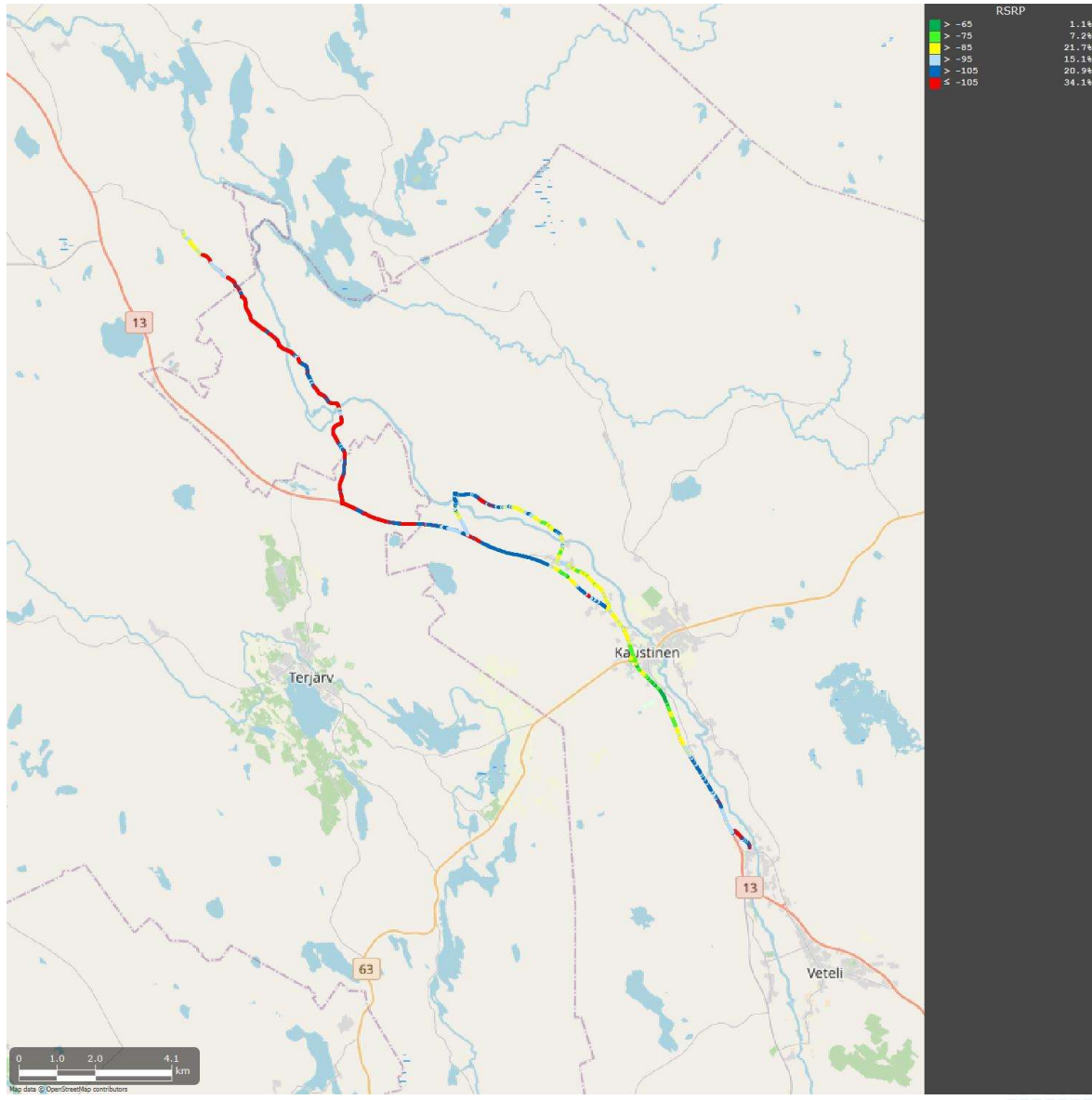
Cell id = solu missä modeemi ollut kiinni

Speed = mittausauton nopeus m/s

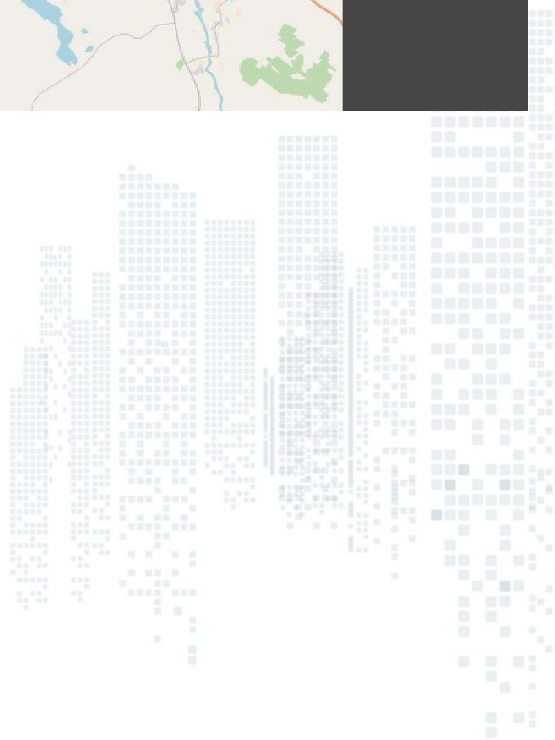
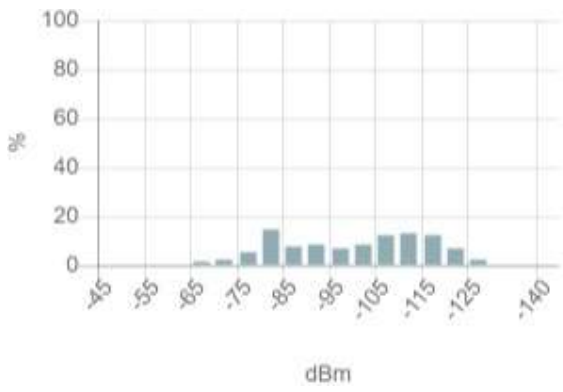


# Telia mittatunti 3

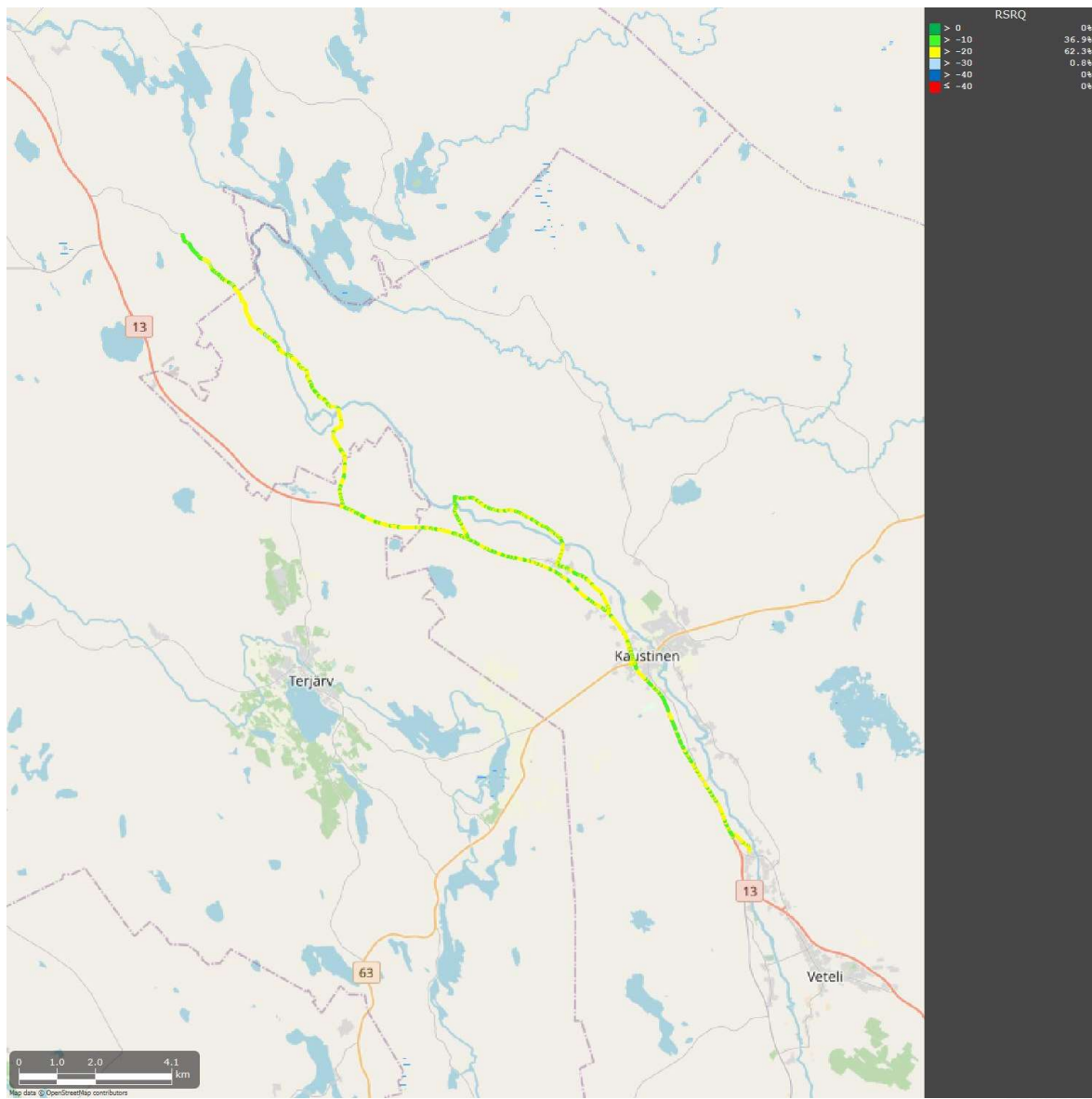
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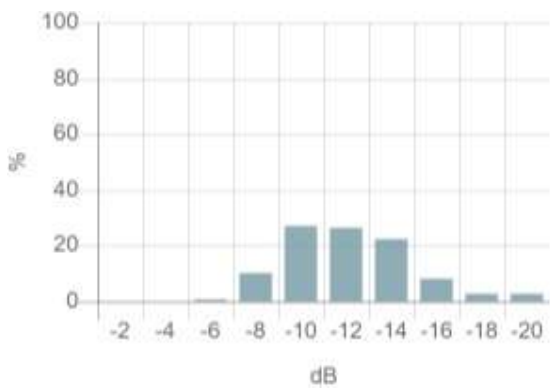
## 4G: RSRP



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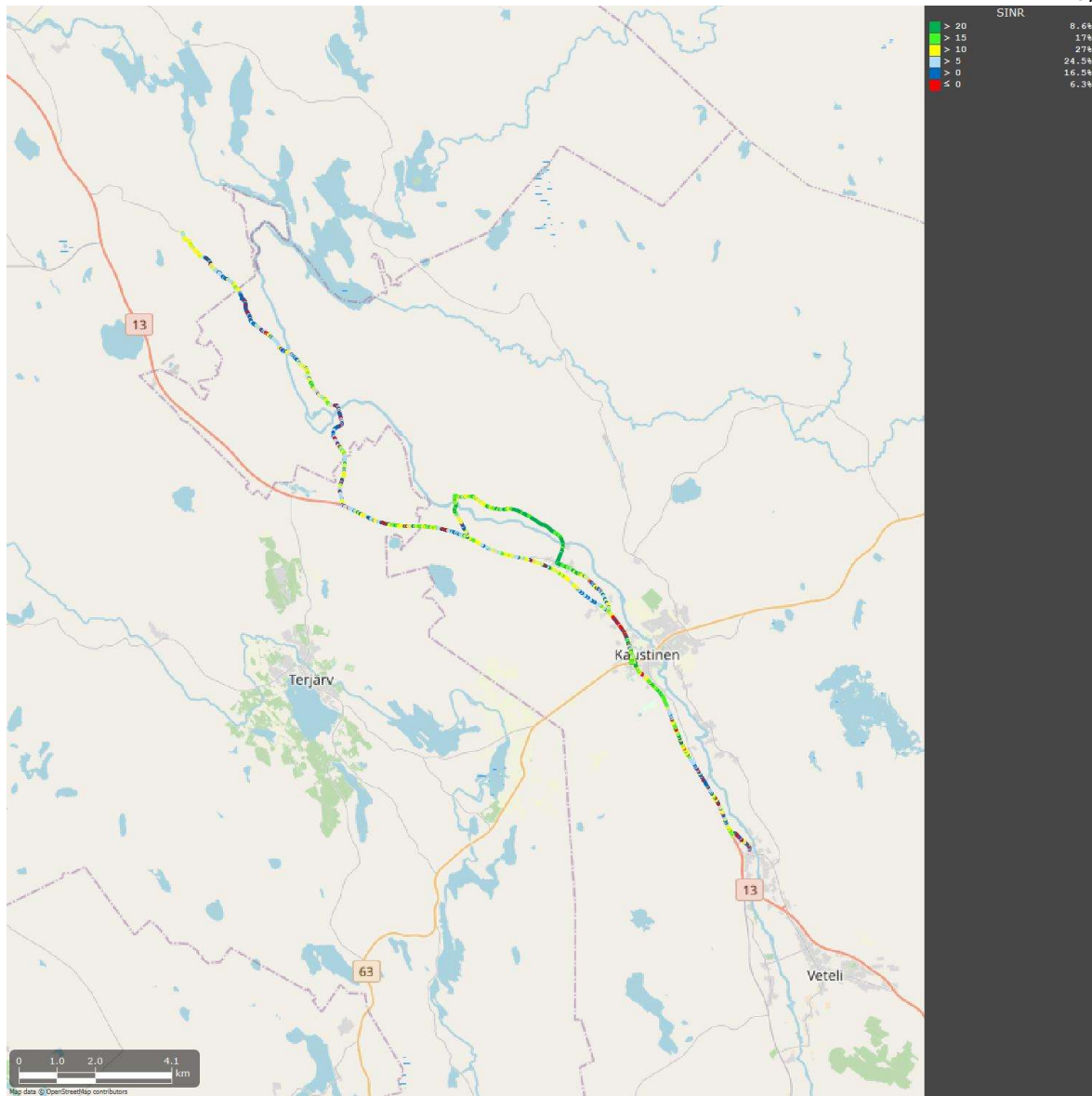


4G: RSRQ

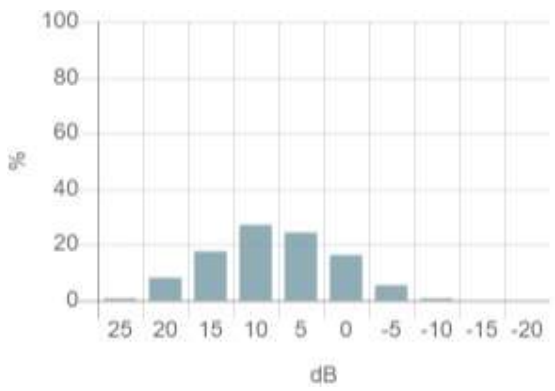


4G: RSRQ



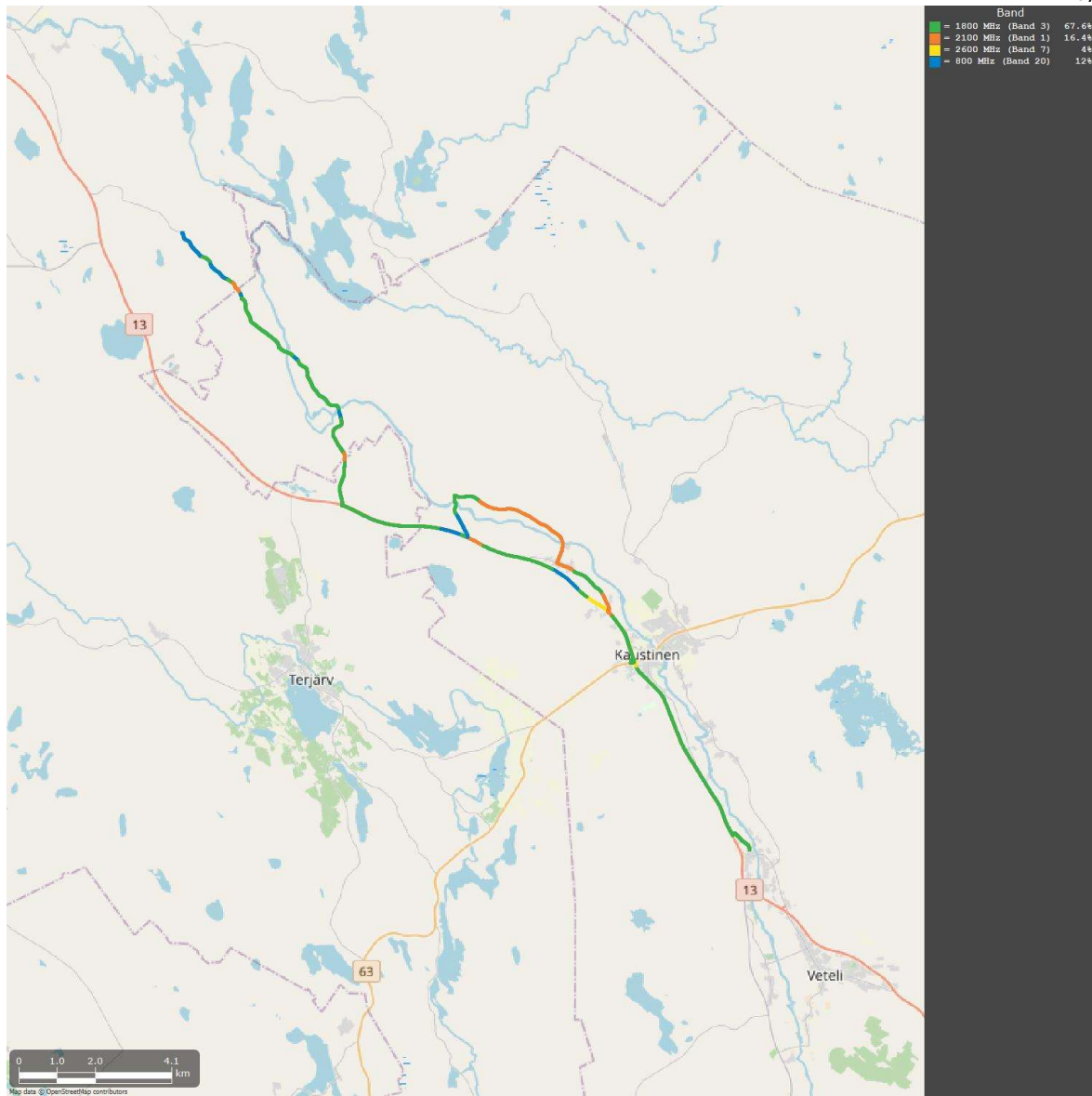


4G: SINR



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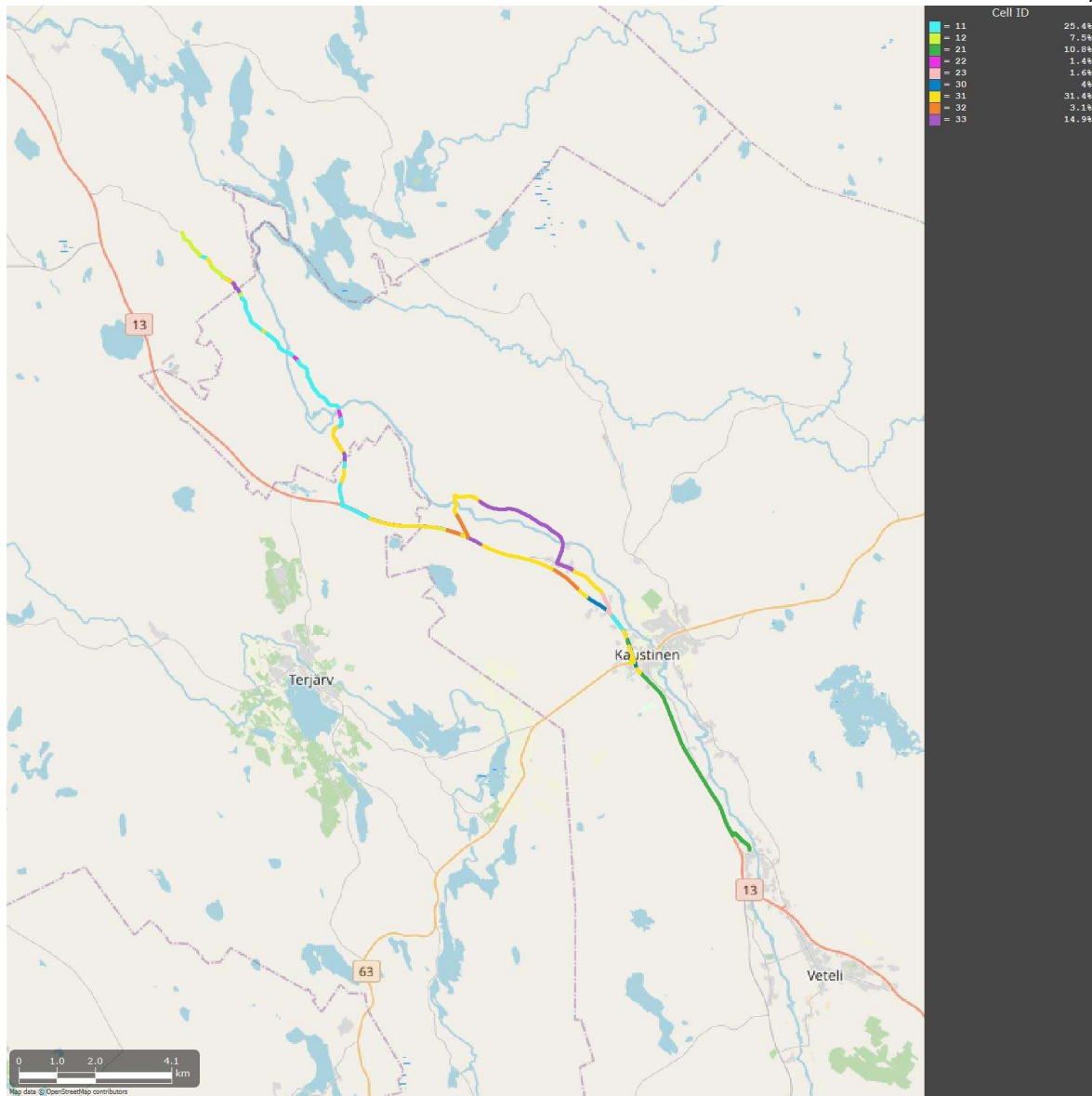


4G: Band



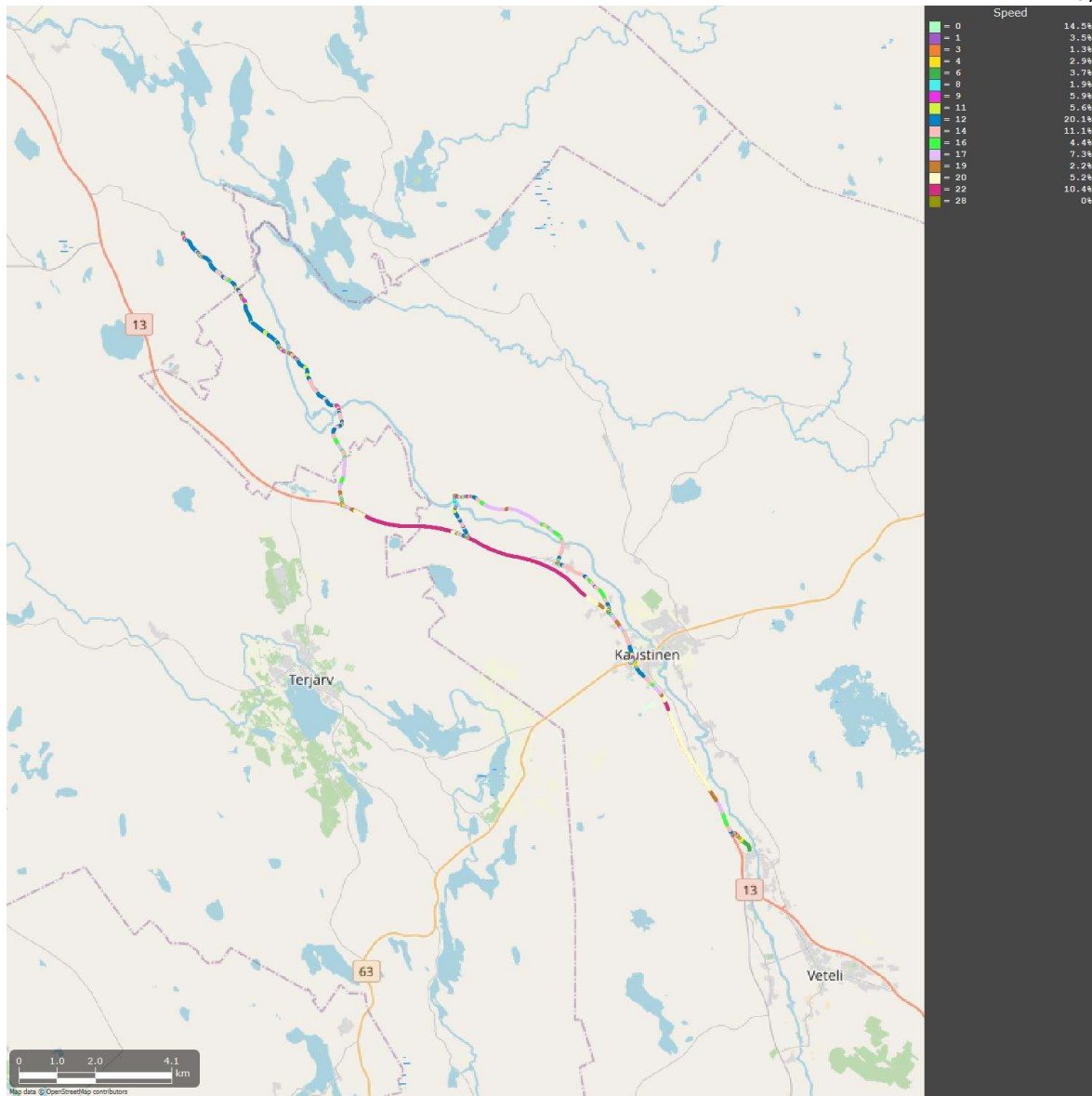
4G: Band





4G: Cell ID





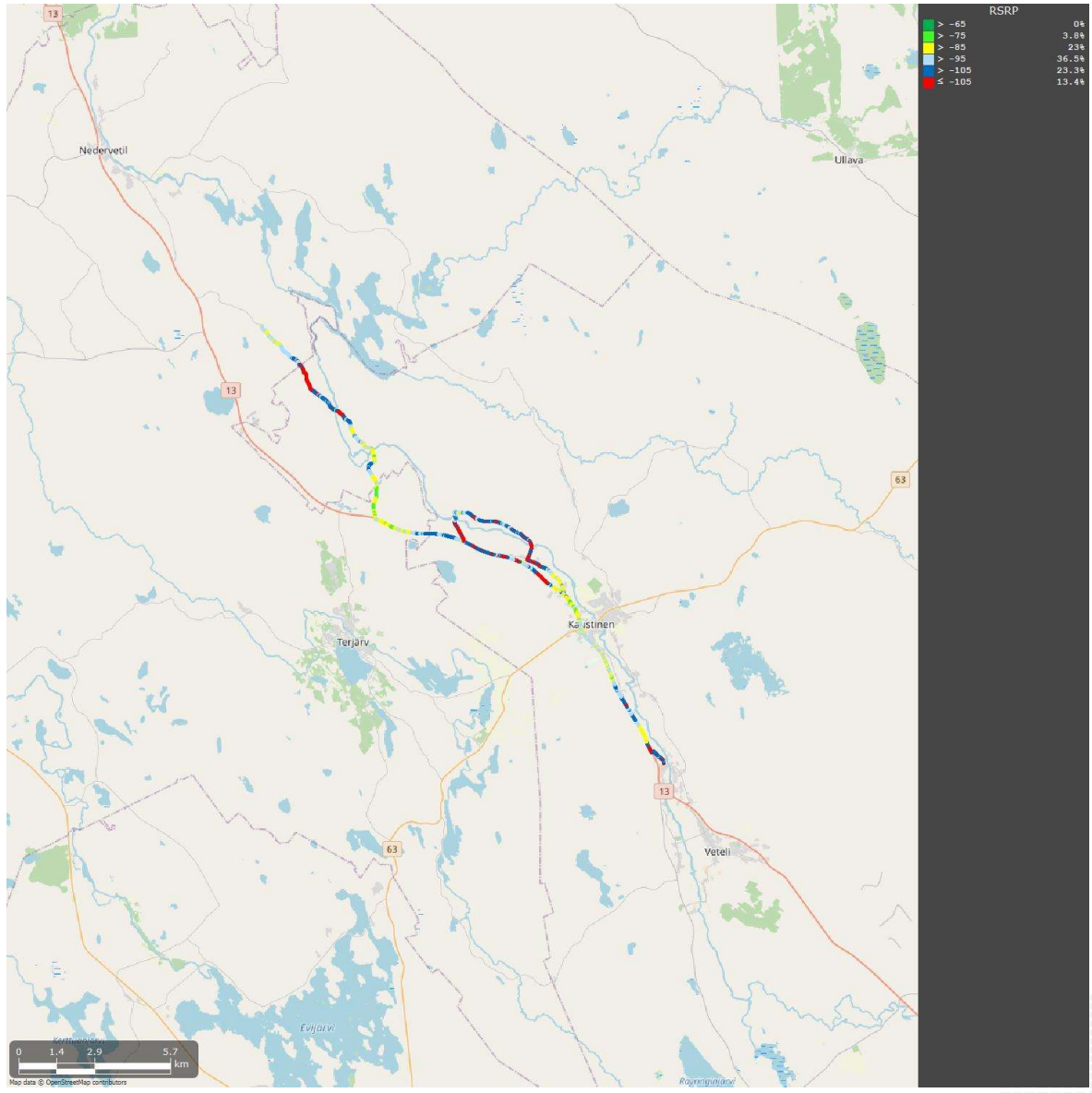
Speed



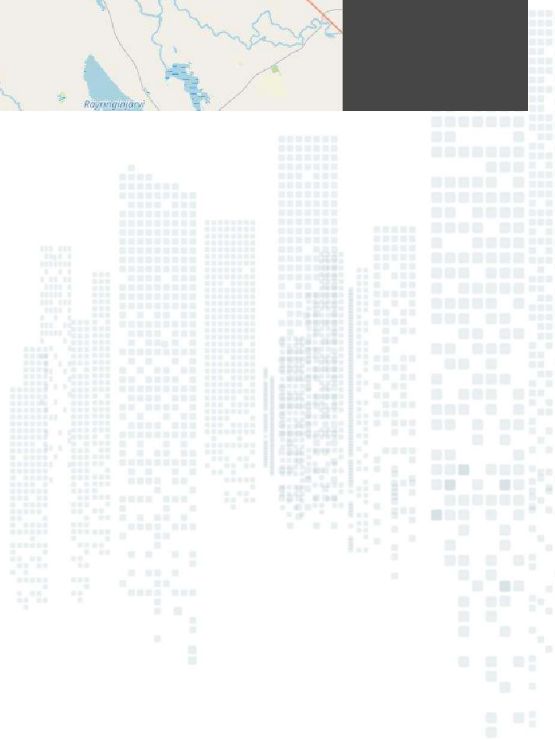
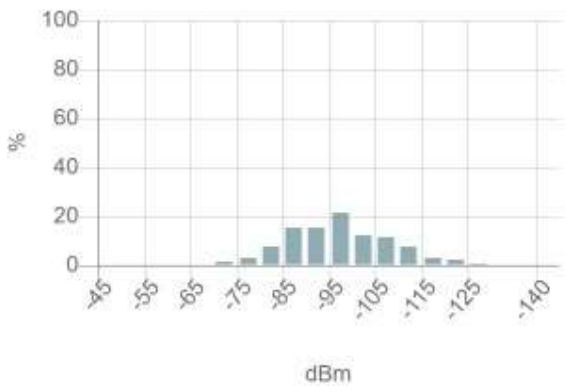


# Elisa mittatunti 3

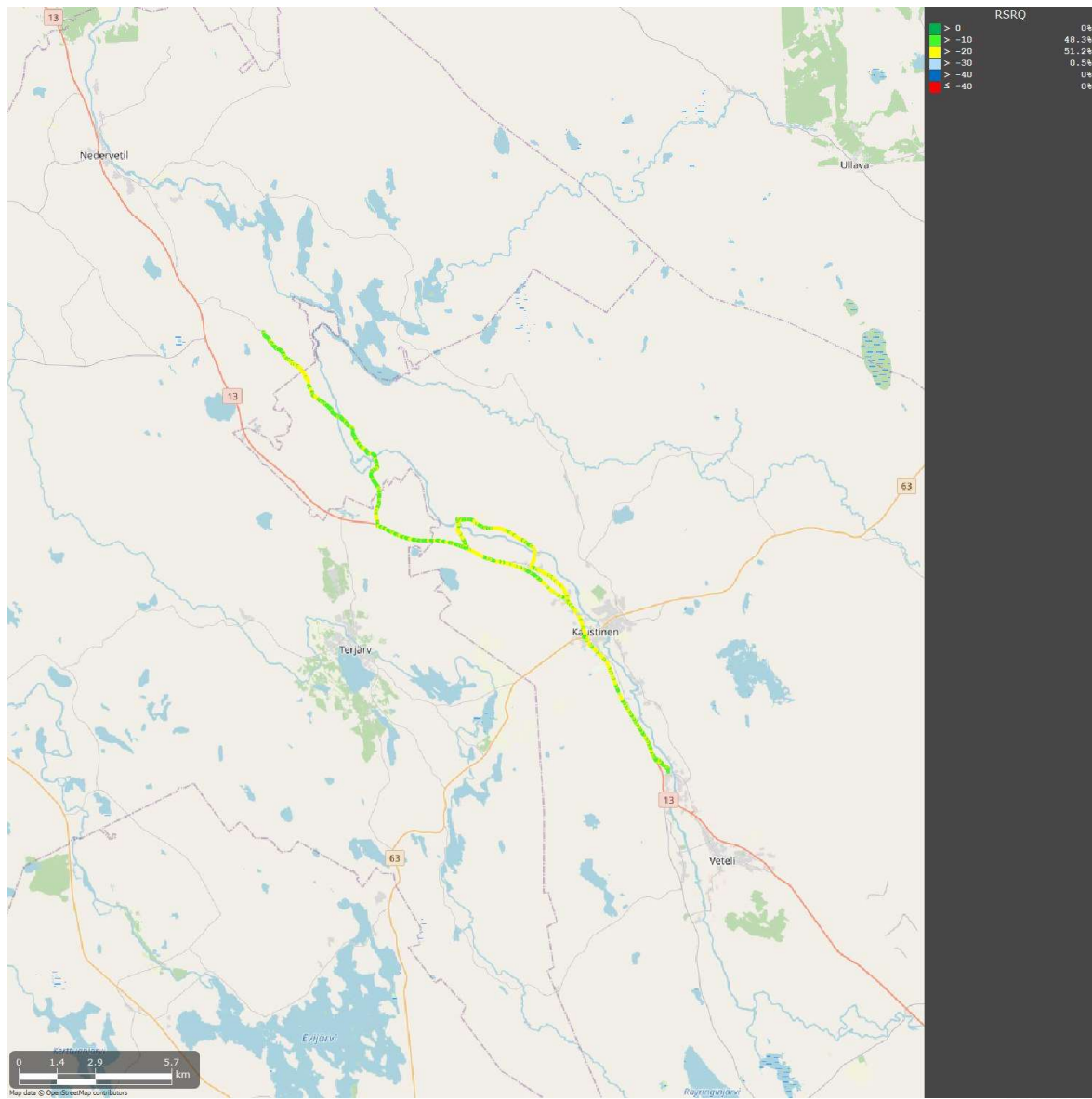
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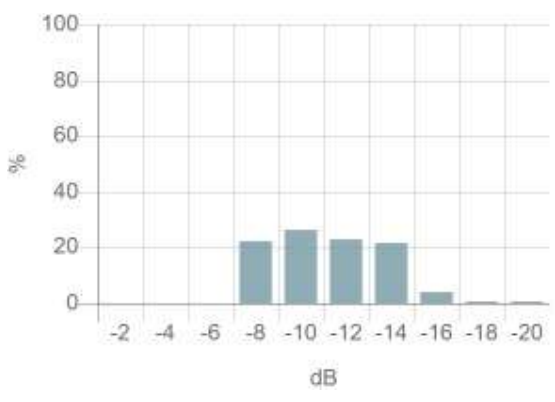
## 4G: RSRP



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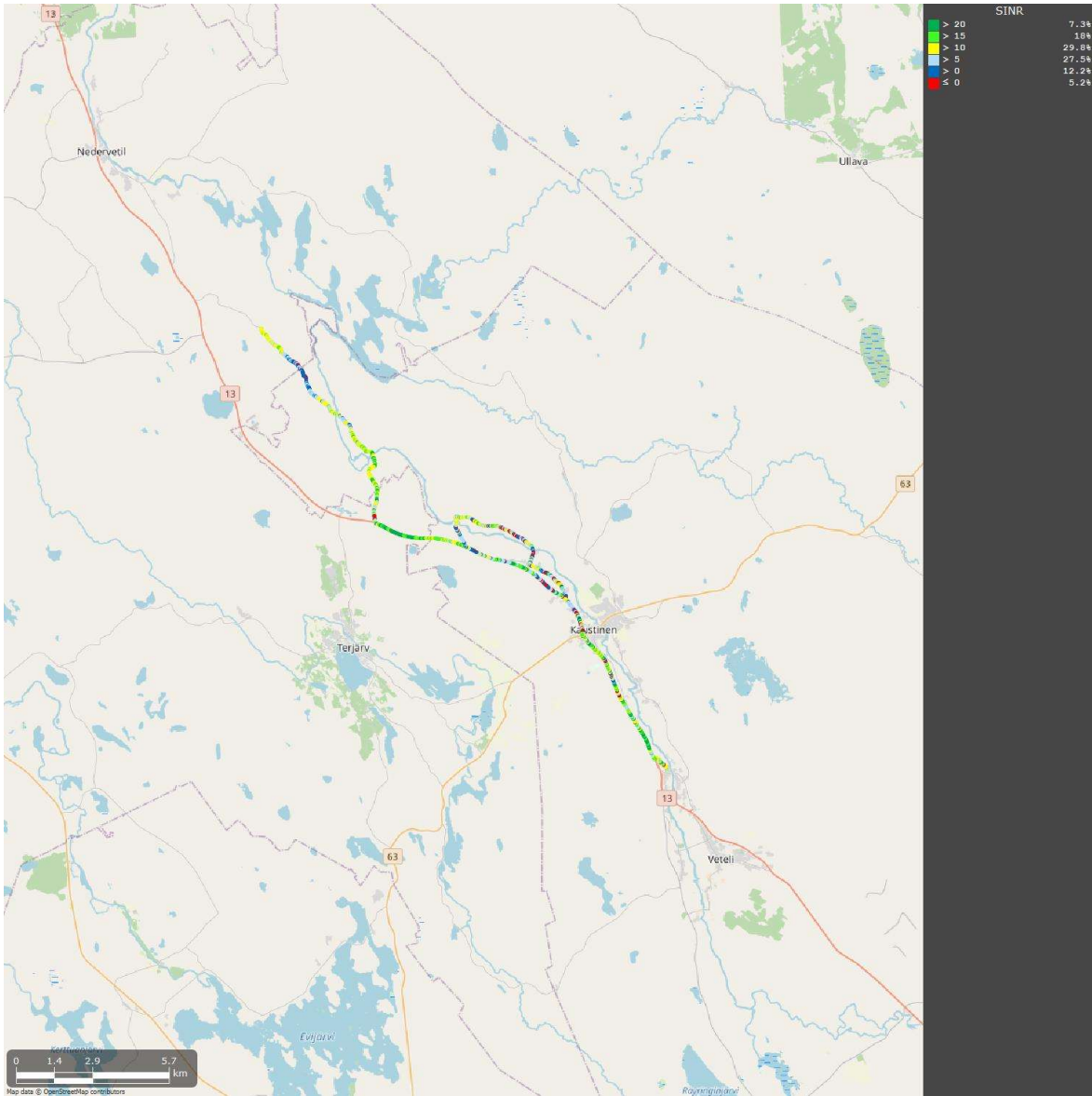


### 4G: RSRQ

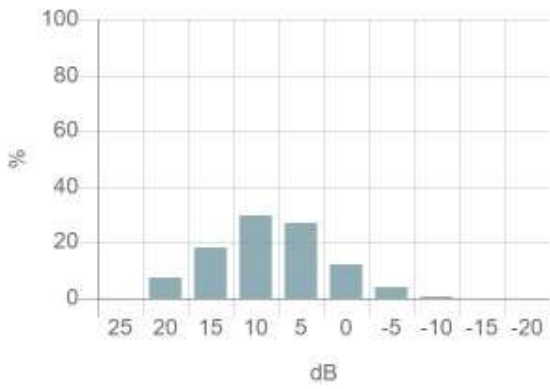


### 4G: RSRQ



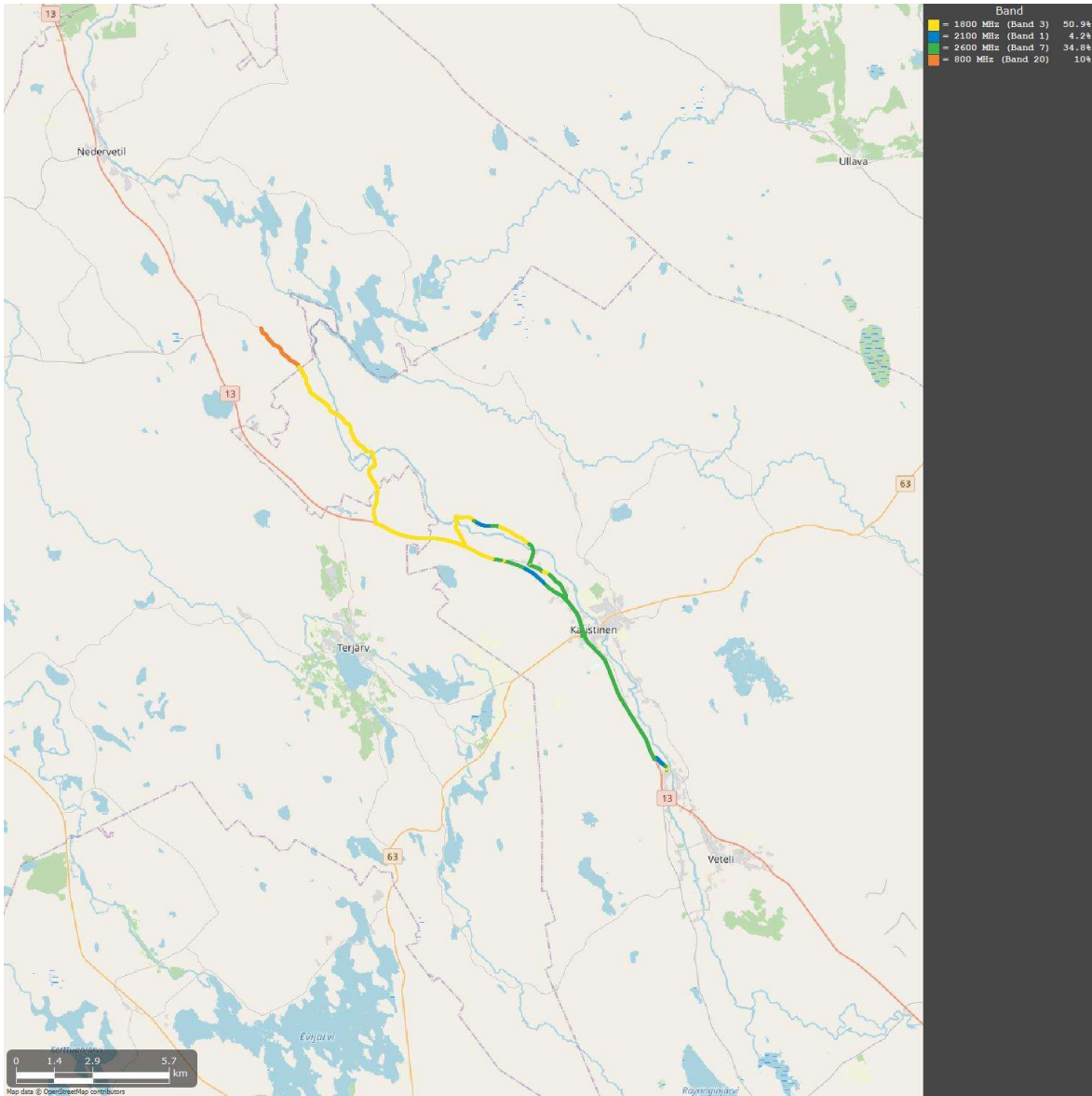


4G: SINR

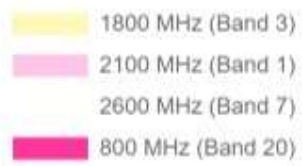


4G: SINR



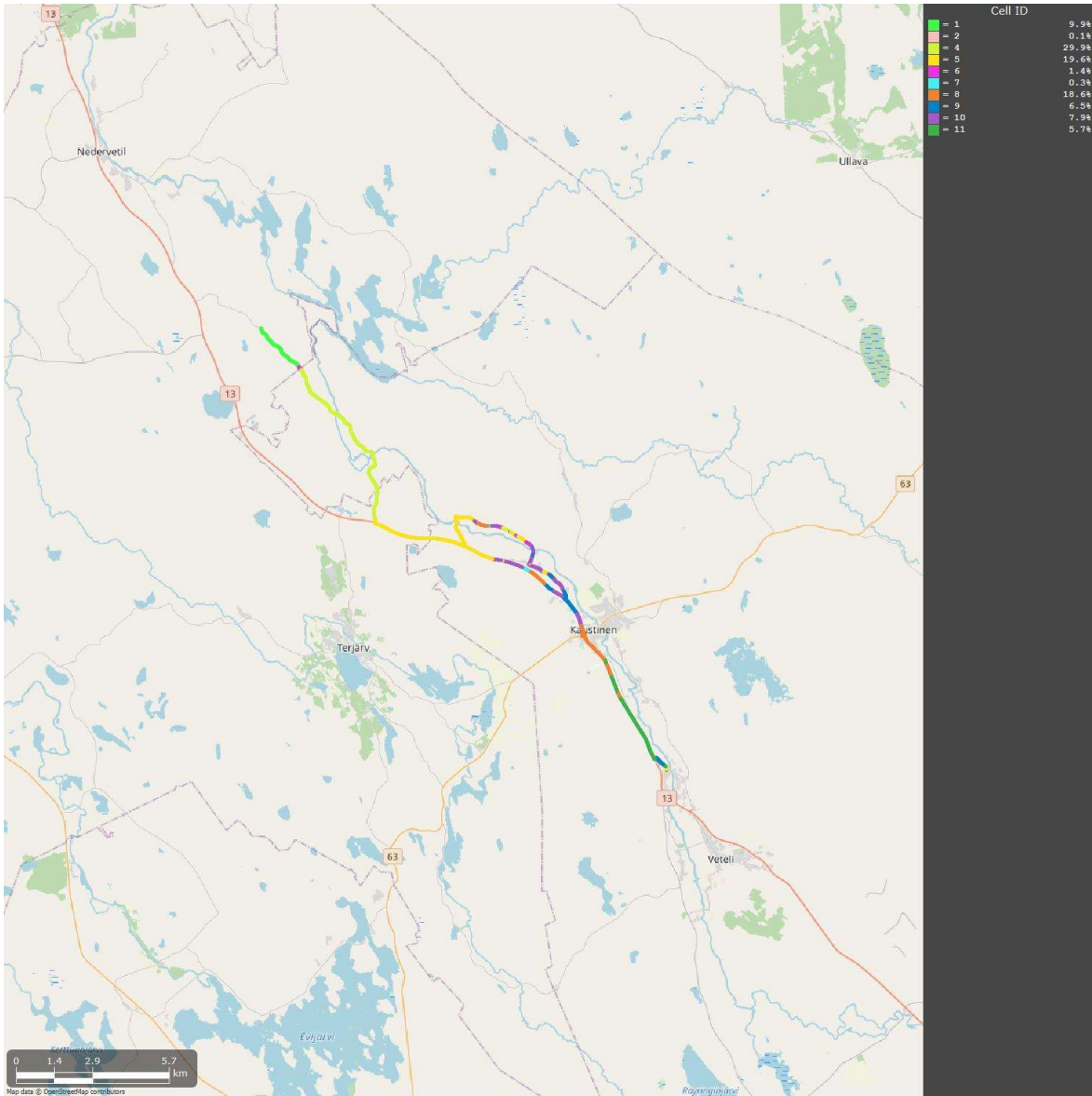


4G: Band



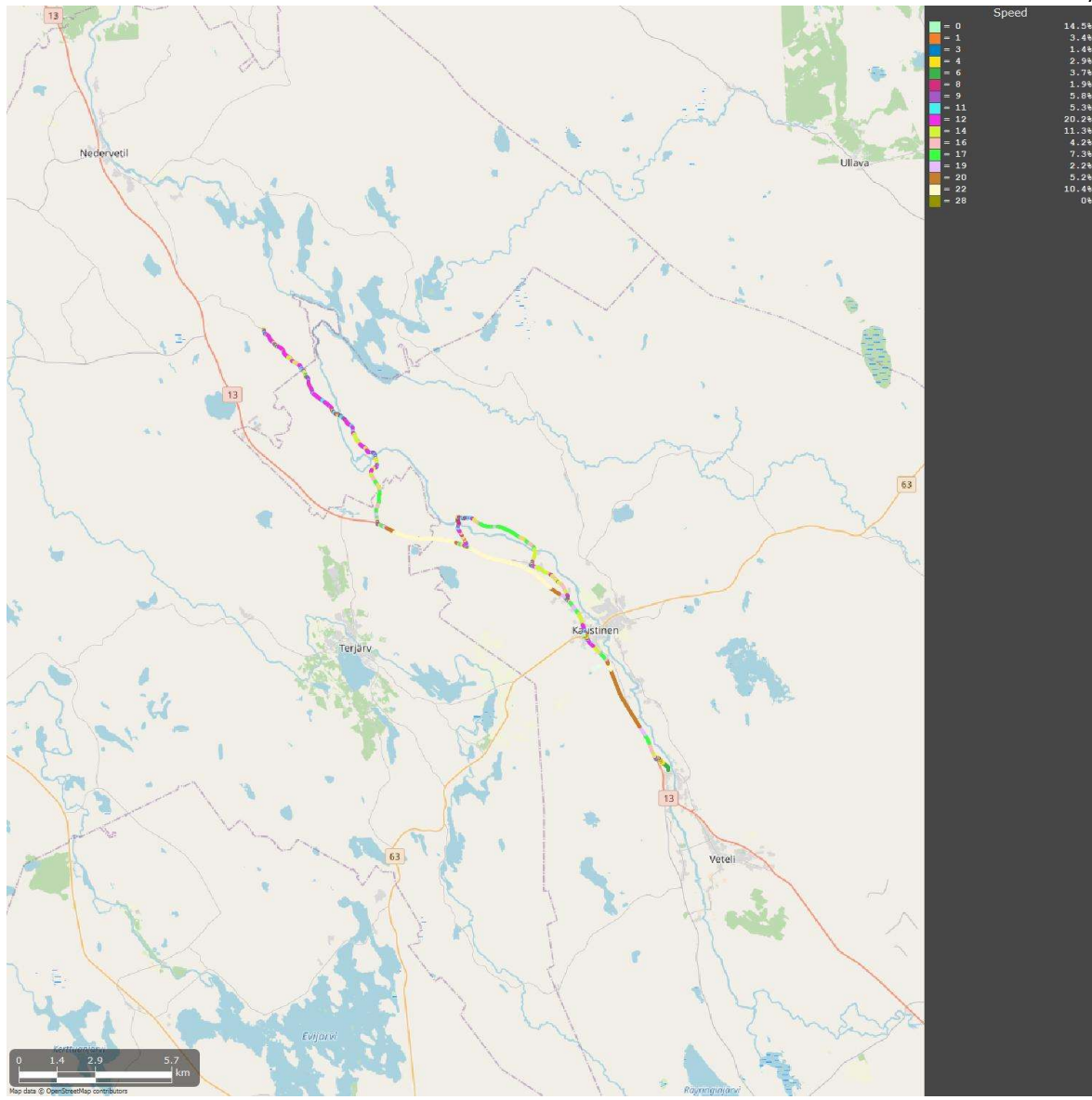
4G: Band





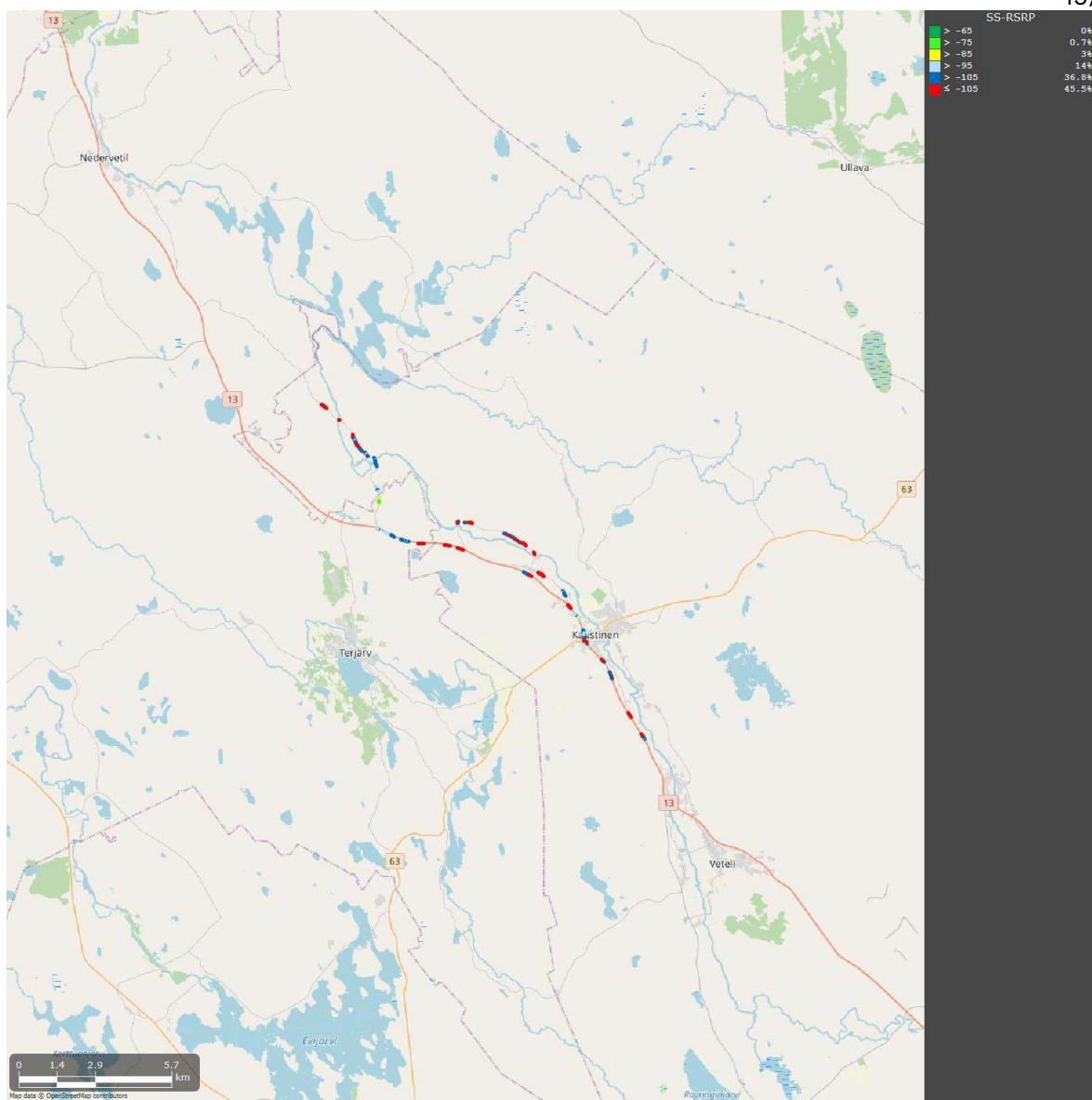
4G: Cell ID



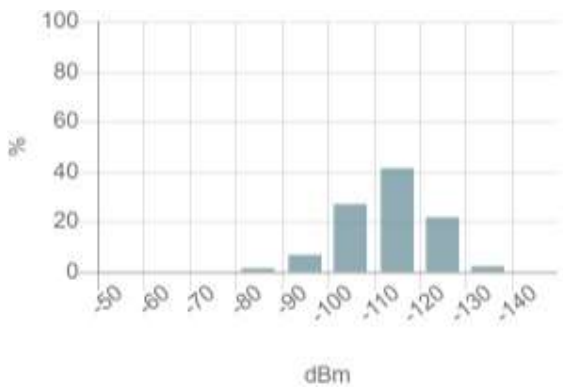


### Speed



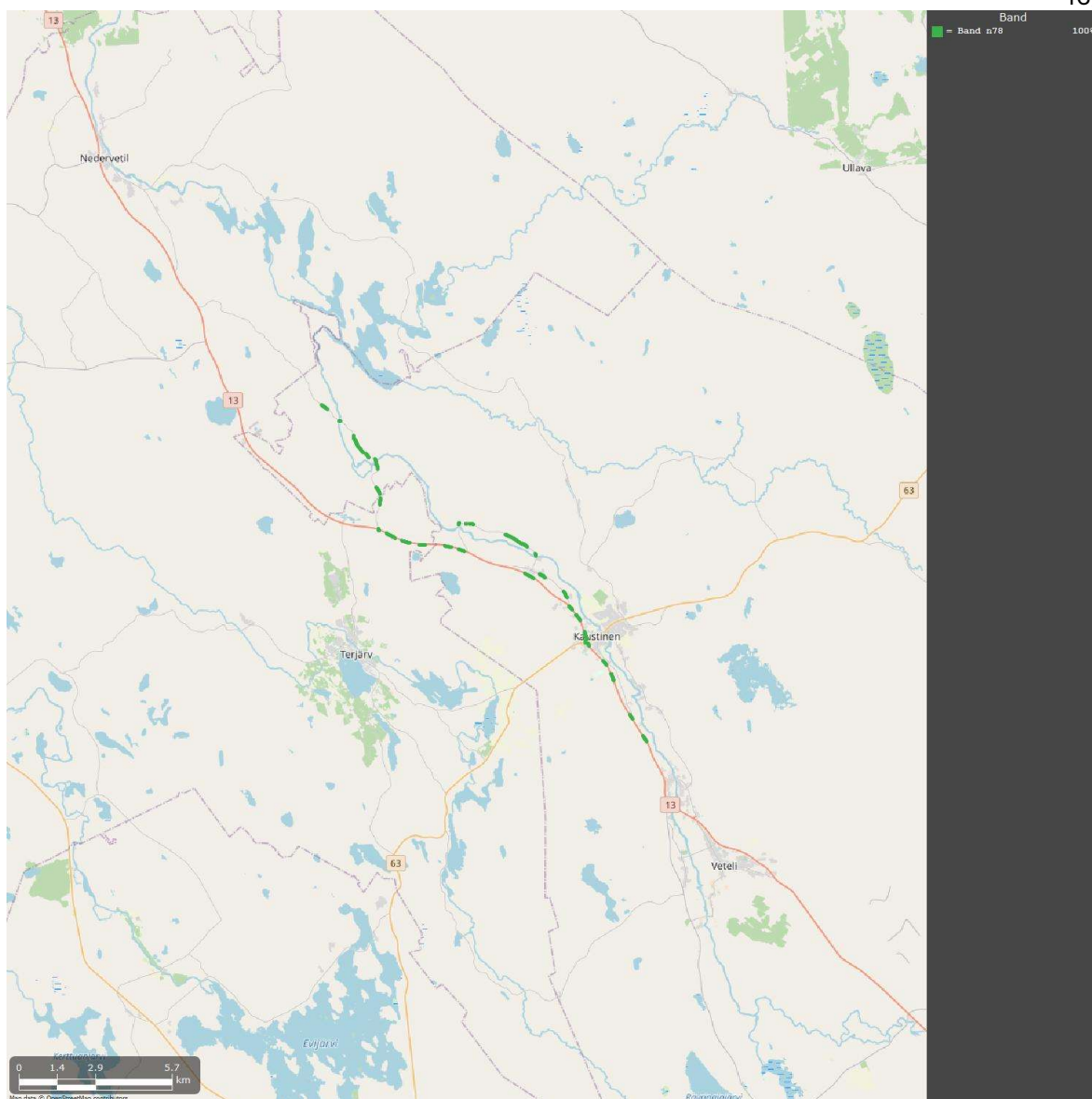


5G: SS-RSRP

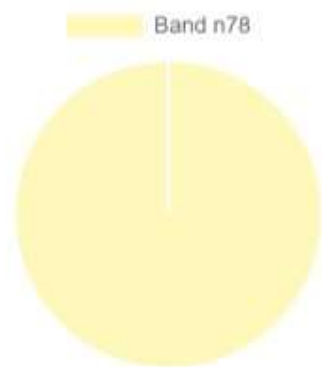


5G: SS-RSRP





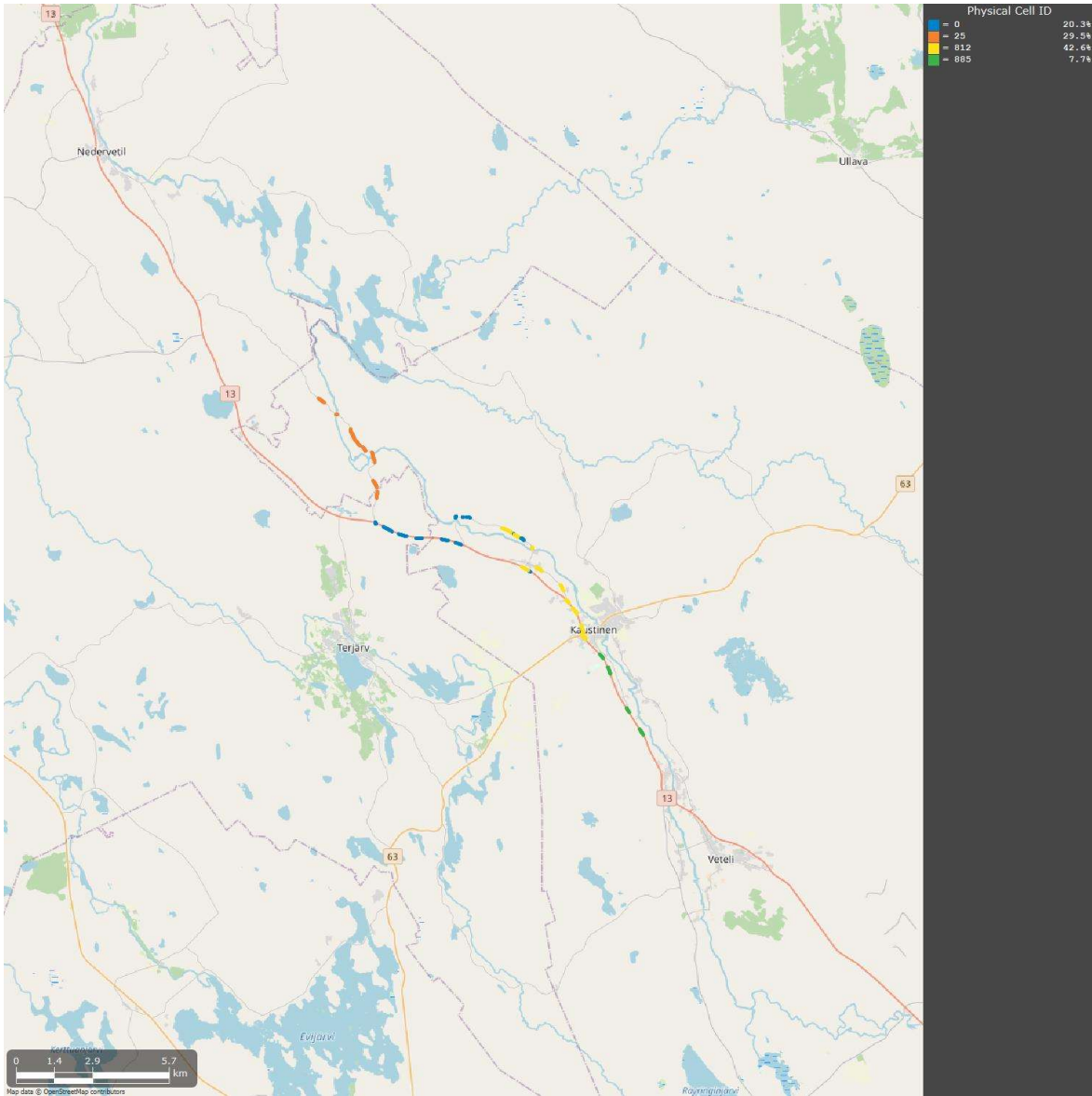
5G: Band



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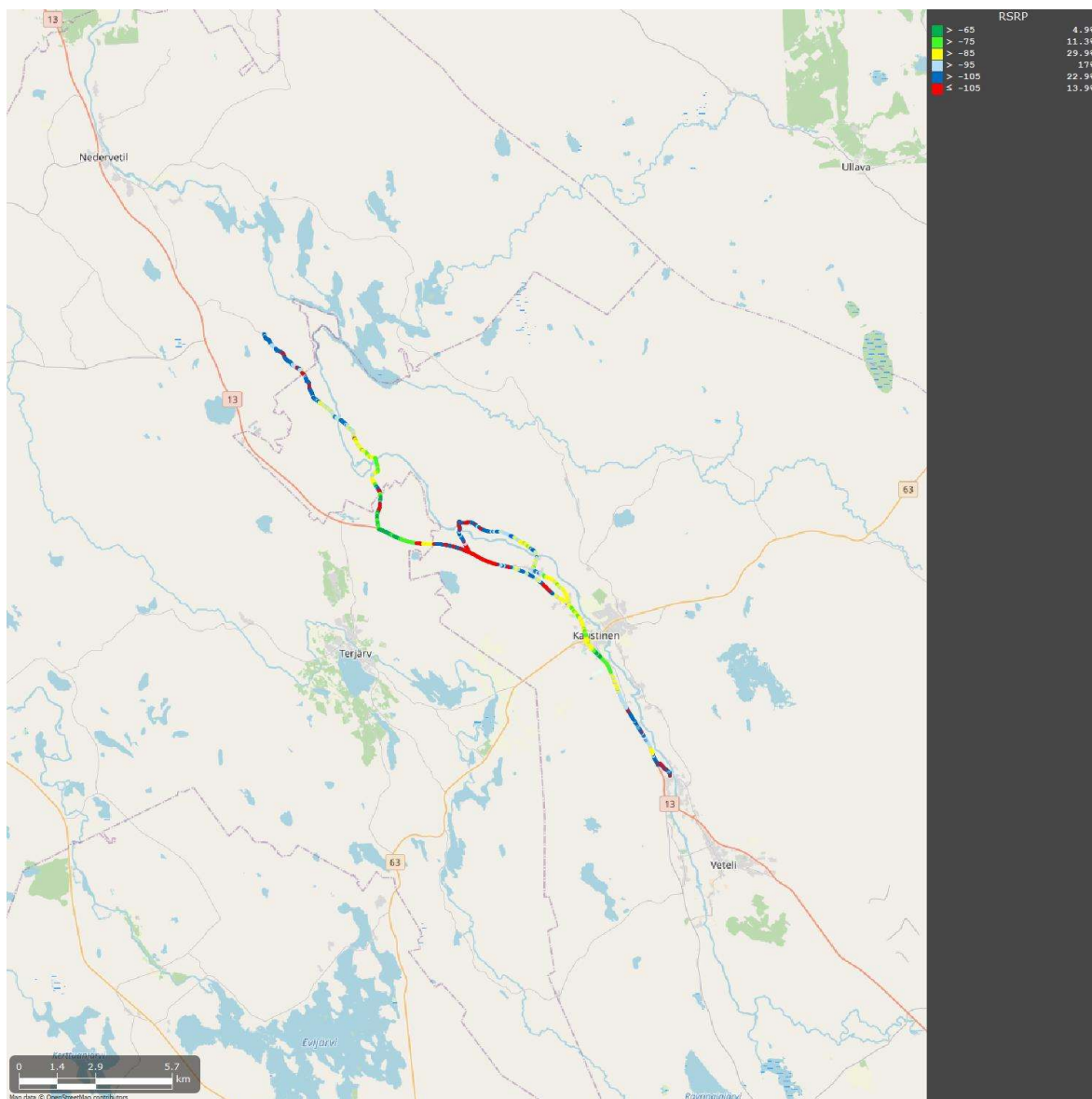


5G: Physical Cell ID

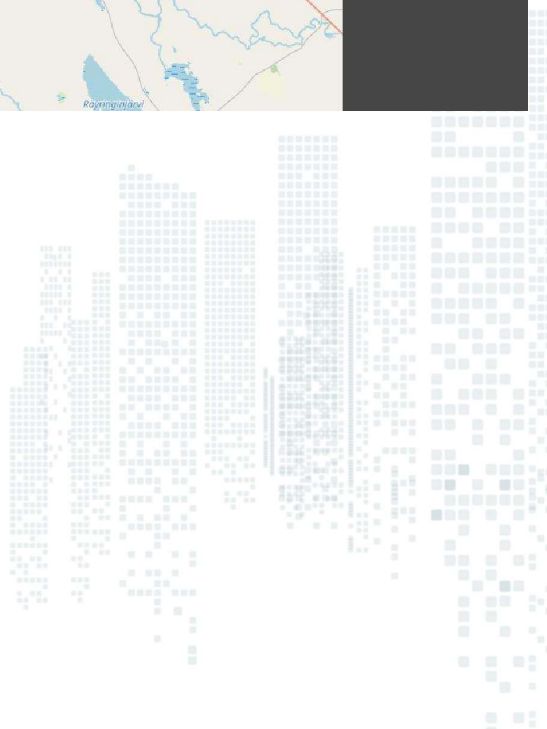
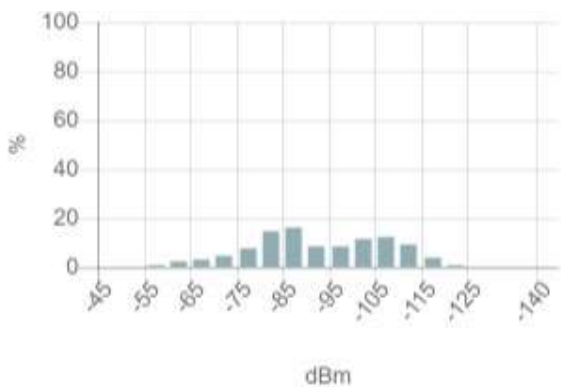


# Dna mittatunti 3

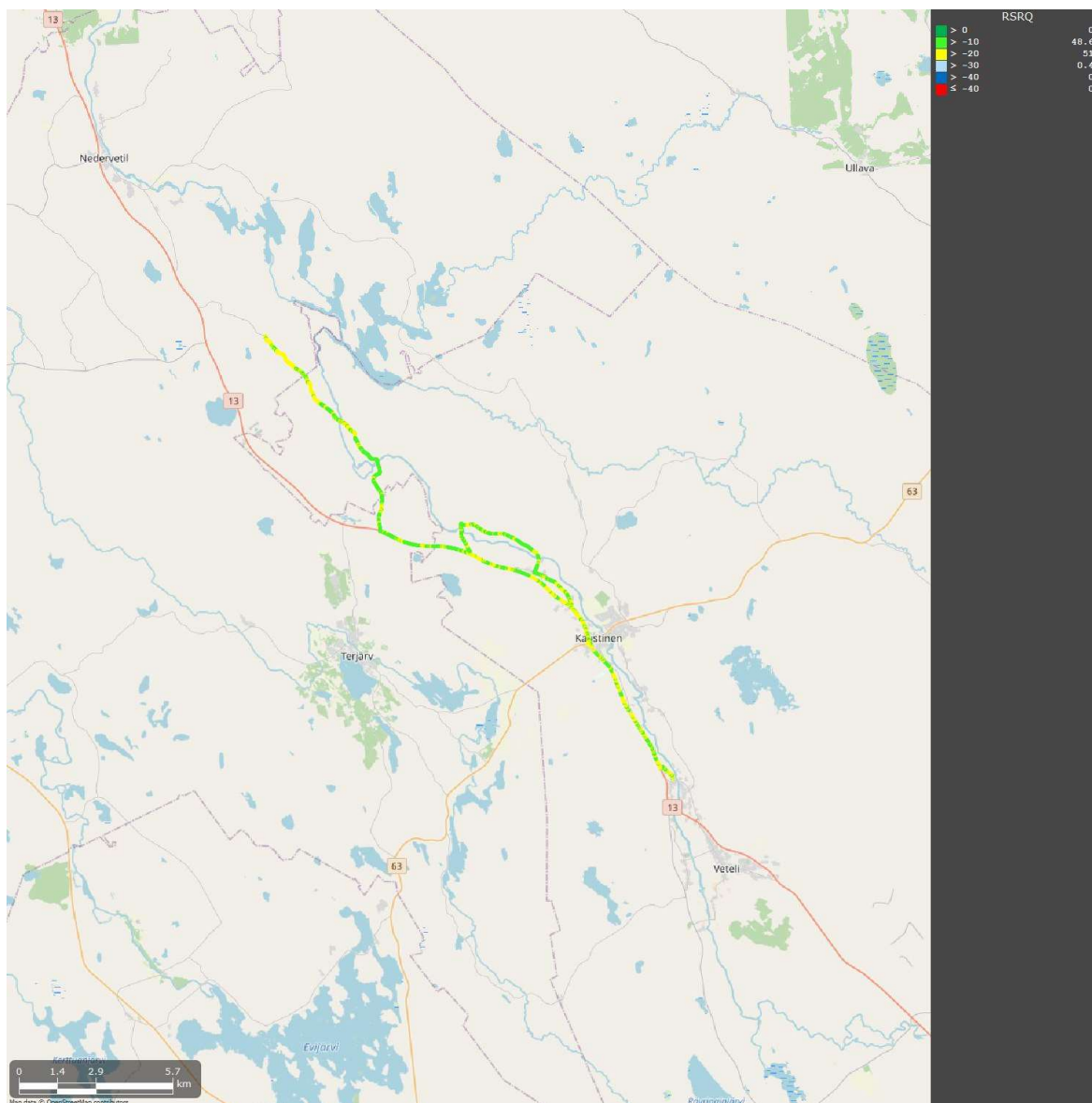
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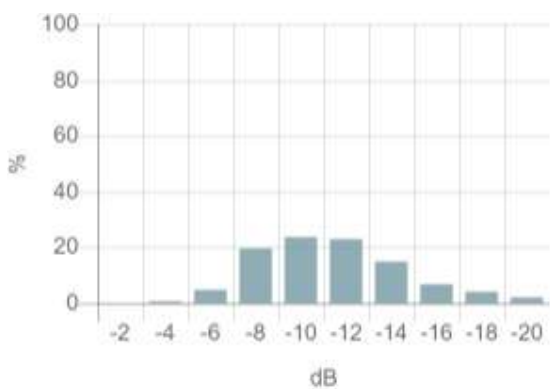
## 4G: RSRP



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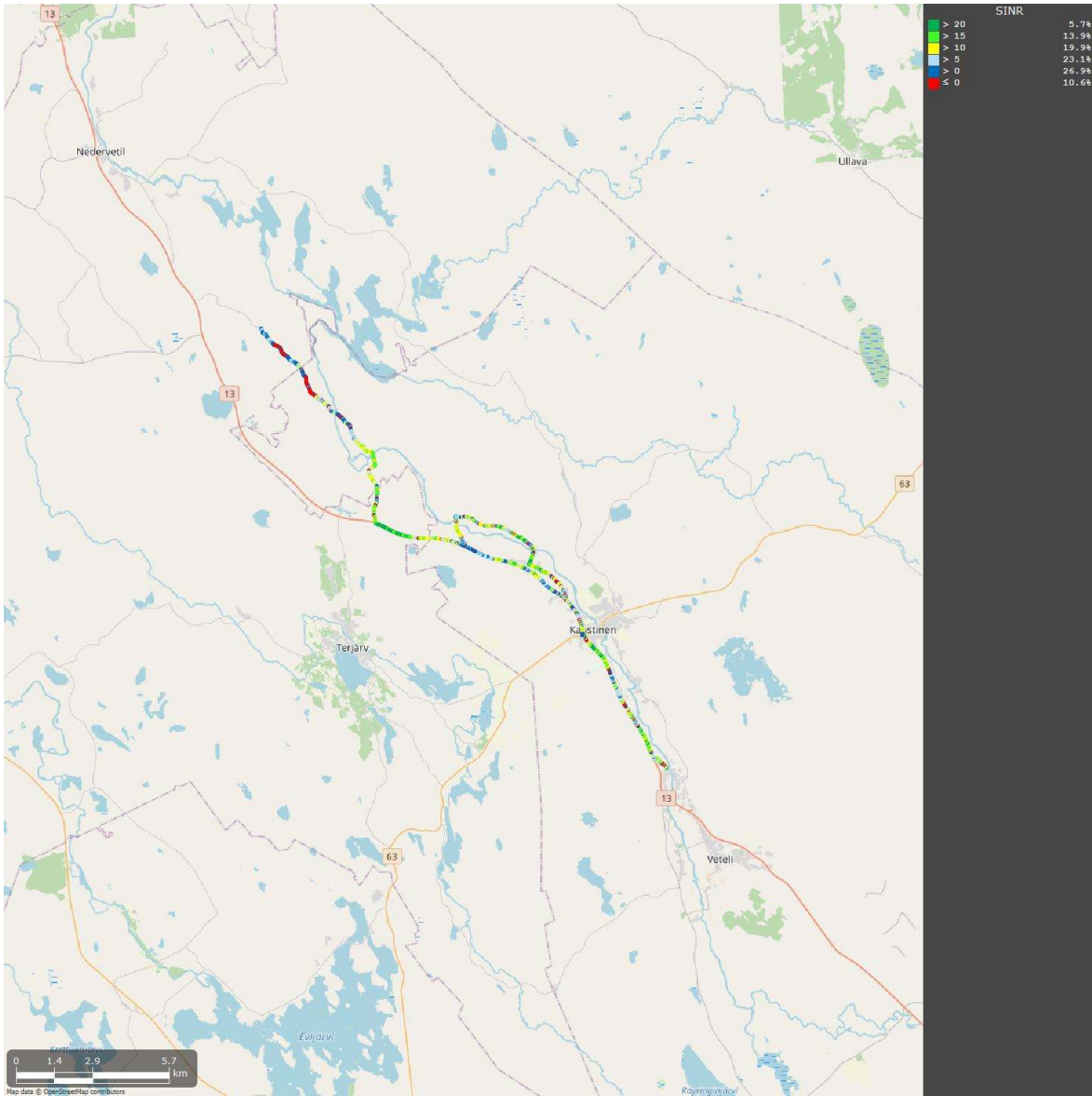


### 4G: RSRQ

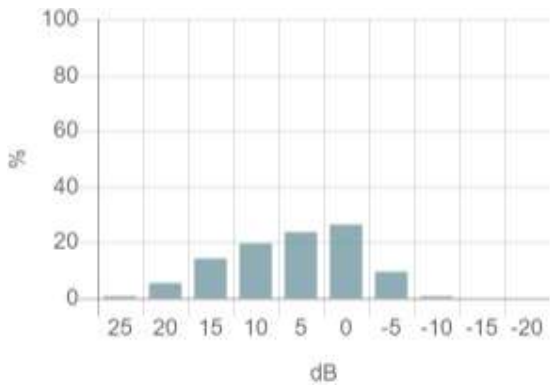


### 4G: RSRQ



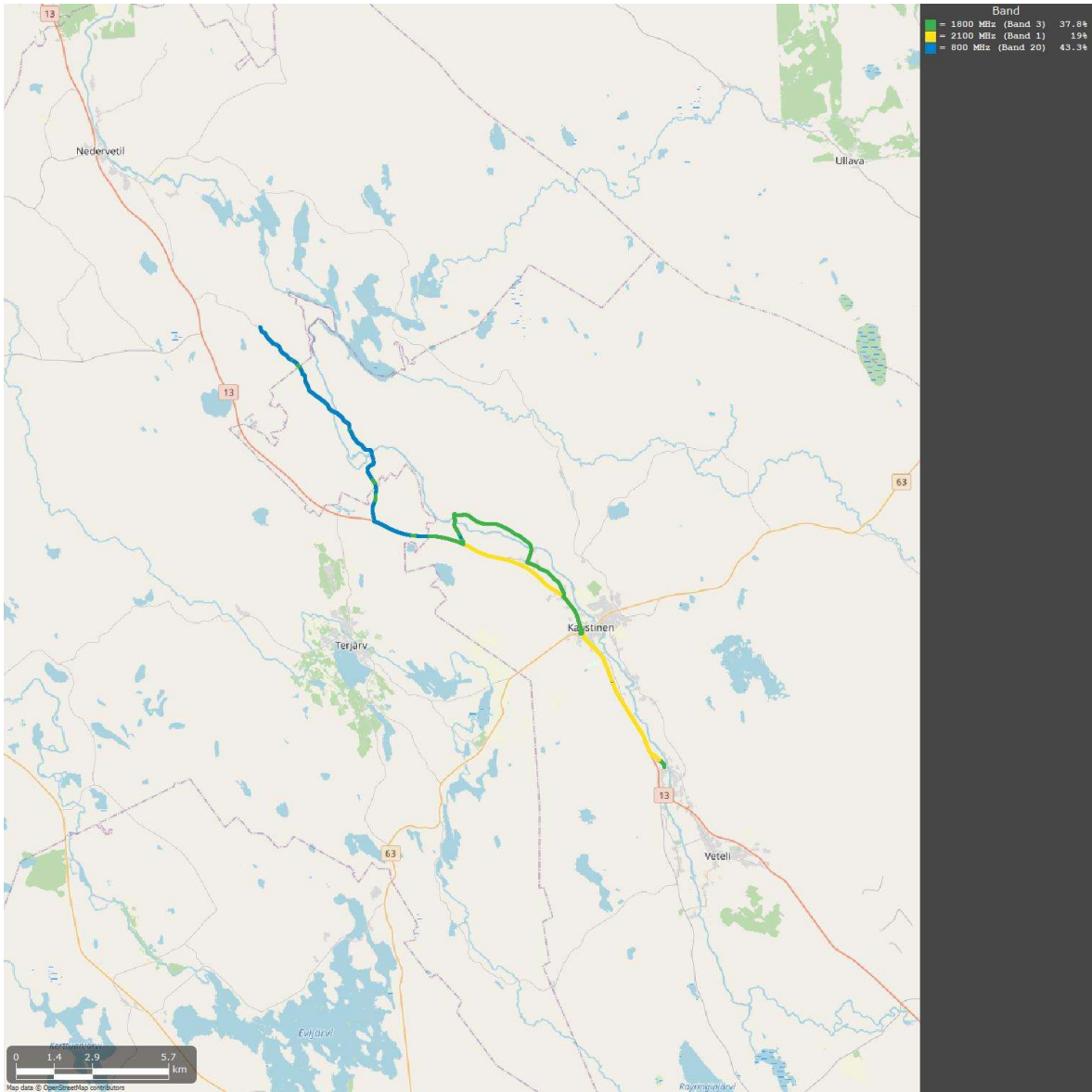


4G: SINR



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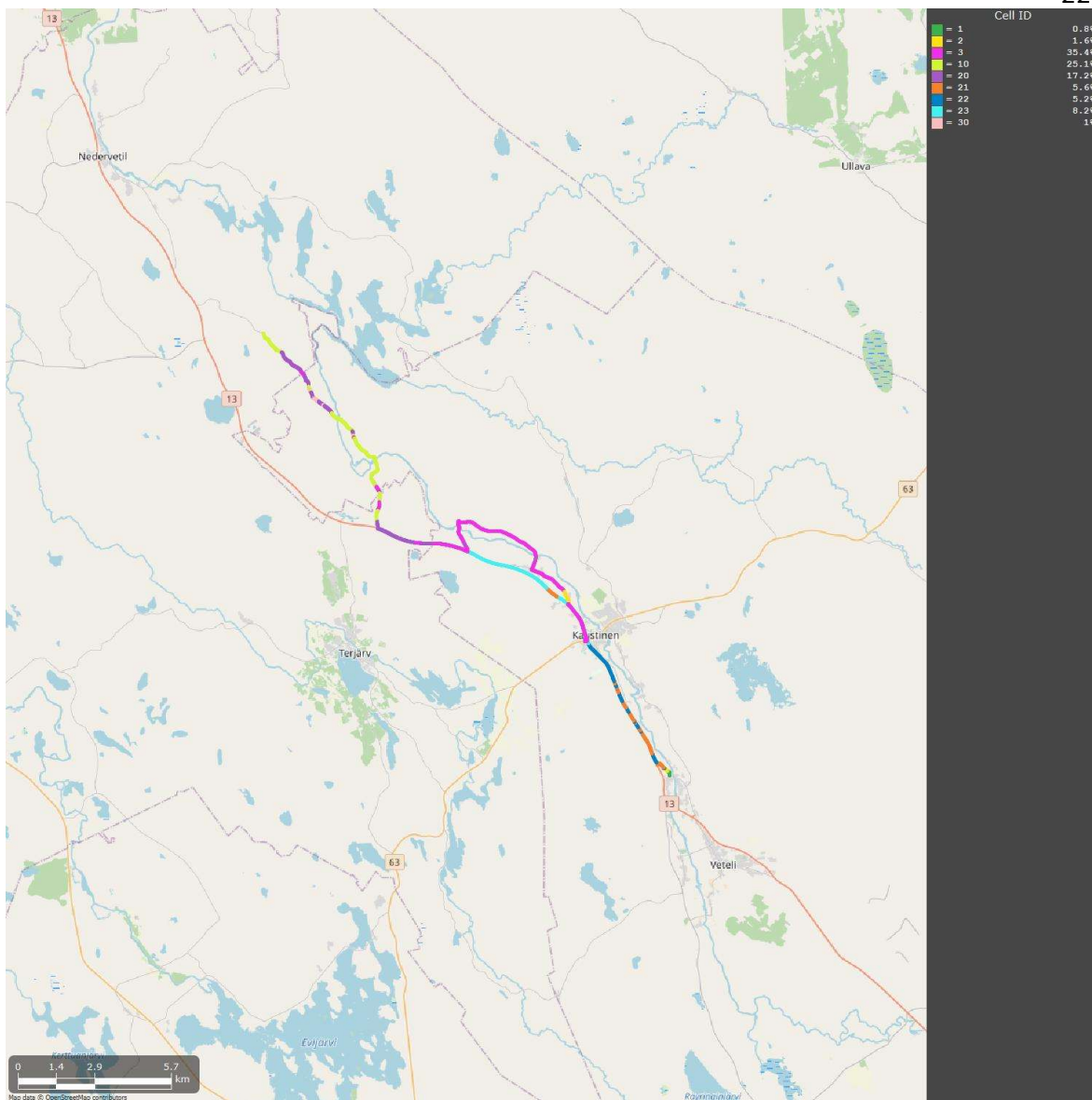


4G: Band



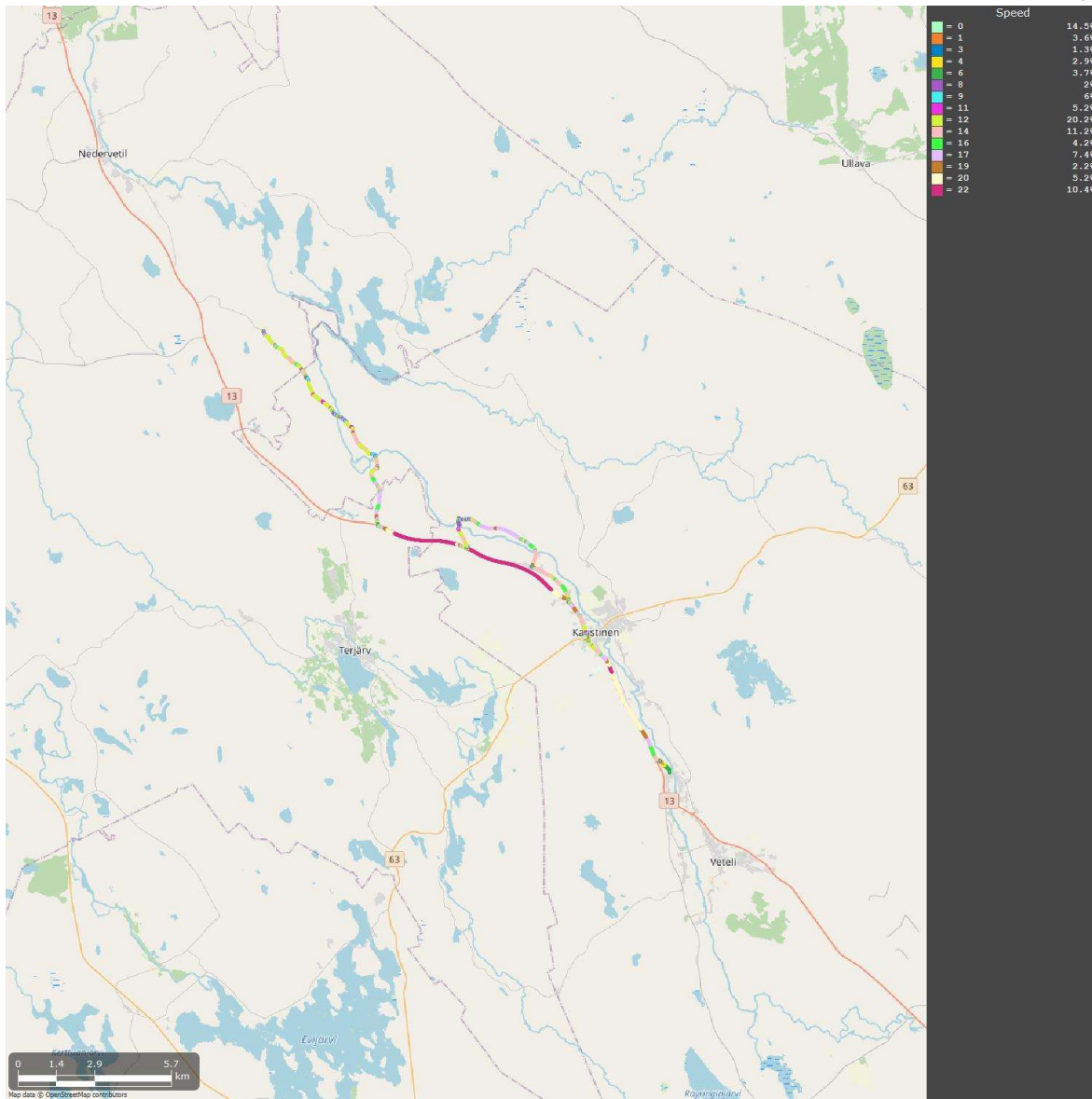
4G: Band





4G: Cell ID





Speed

