

Seismic data for reporting explosions

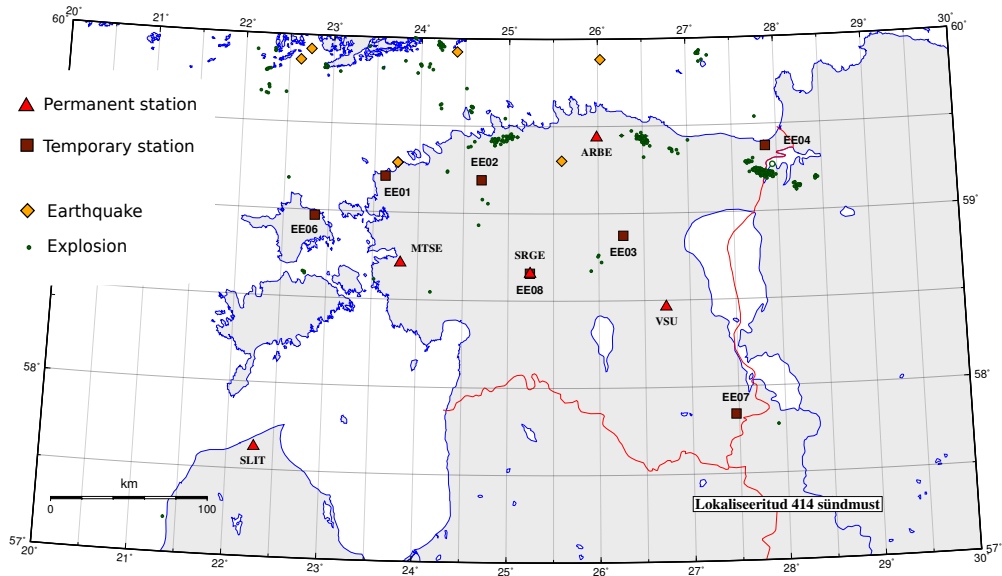
IC WS NOISE DATA

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Seismic data collection

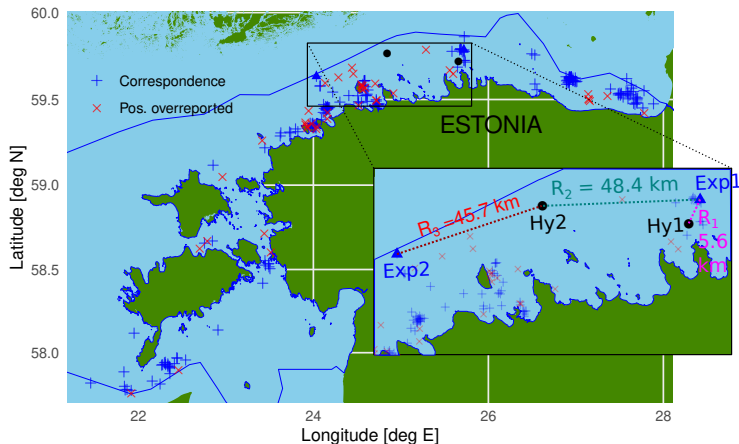


The data contains

- Timestamp
- Location: coordinates and depth
- Error estimates for location
- Magnitude of event
- Type of event: explosion, earthquake, landslide
- Fit with schedule of detonations in mines

Conference paper

Mustonen & Klauson (2023) *Reporting Impulsive Noise from Underwater Explosions Using Seismic Data*

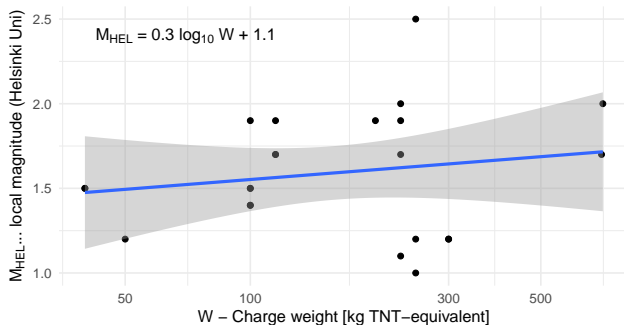


Benefits

- Representative: no. of seismic data explosions coincides with no. listed UXO disposals by the navy
- The measured magnitude – best proxy for energy of explosion

Using this data in reporting

Extract only explosions in the sea. Magnitude \rightarrow Intensity of event



$$M_{Lv} = 0.28 \log_{10}(W) + 1.83^*$$

Using this data in reporting

very low	$M \leq 0.76$
low	$0.76 < M \leq 1.43$
medium	$1.43 < M \leq 2.09$
high	$2.09 < M \leq 2.76$
very high	$2.76 > M$

*Not comfortable with this actually

Questions?

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