

SURVEY INFORMATION

Date: 2023/12/30

Client: Comune di Monteverdi Marittimo

PLACE INFORMATION

Place ID: Canneto

Address: Strada dei 4 comuni - sala polifunzionale comunale

Latitude: 43.200230

Longitude: 10.734430

Coordinate system: WGS84

Elevation: 282 m

Weather: nuvoloso

Notes: -

STATION INFORMATION

Station code: 2

Model: SARA GEOBOX

Sensor: SARA SS45 (external 4.5 Hz sensors)

Notes: traffico veicolare scarso

PHOTOGRAPHIC REFERENCES



SIGNAL AND WINDOWING

Sampling frequency: 200 Hz

Recording start time: 2023/12/28 13:59:26

Recording length: 35 min

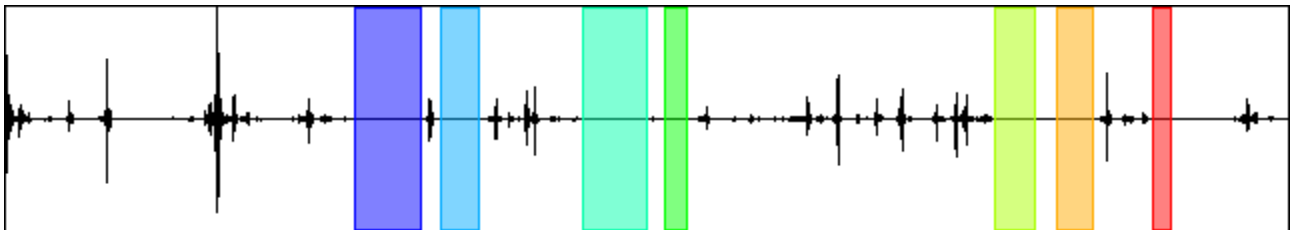
Windows count: 7

Average windows length: 67.66

Signal coverage: 22.55%

76093 Counts

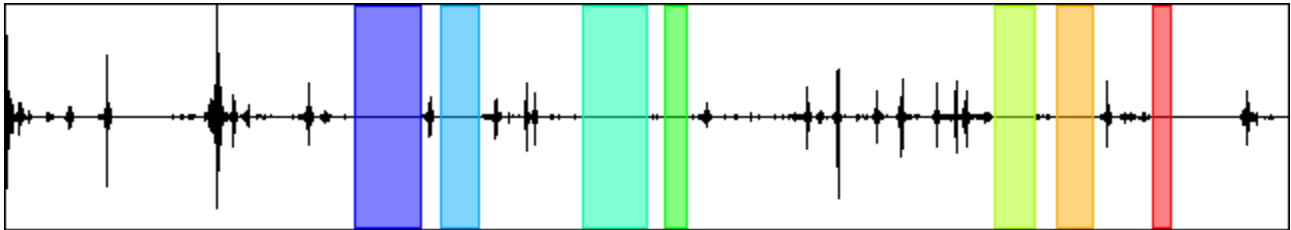
CHANNEL #1 [V]



-63474 Counts

59044 Counts

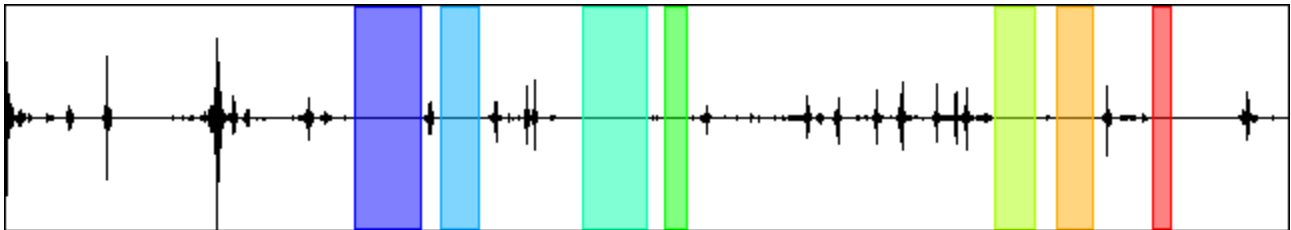
CHANNEL #2 [N]



-48799 Counts

55599 Counts

CHANNEL #3 [E]



-78263 Counts

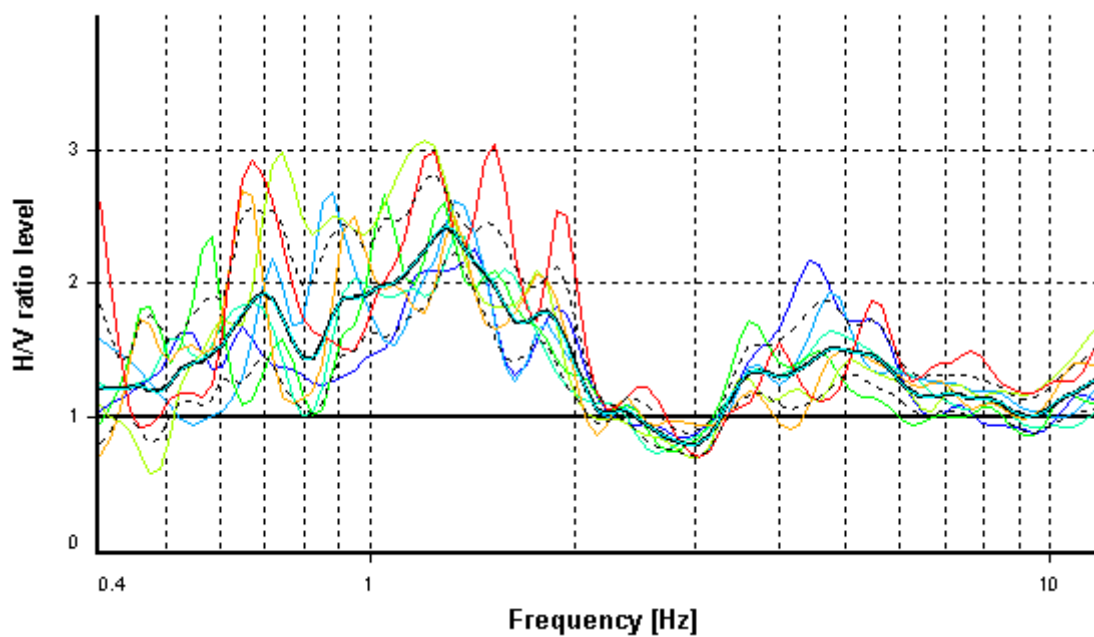
HVSR ANALYSIS

Tapering: Enabled (Bandwidth = 5%)

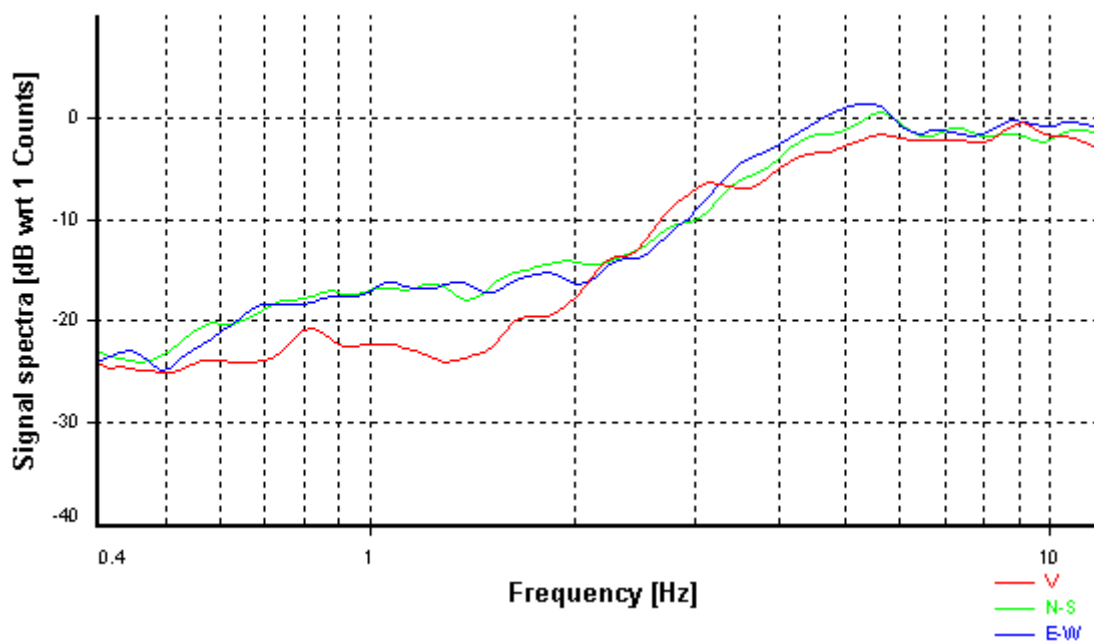
Smoothing: Konno-Ohmachi (Bandwidth coefficient = 40)

Instrumental correction: Disabled

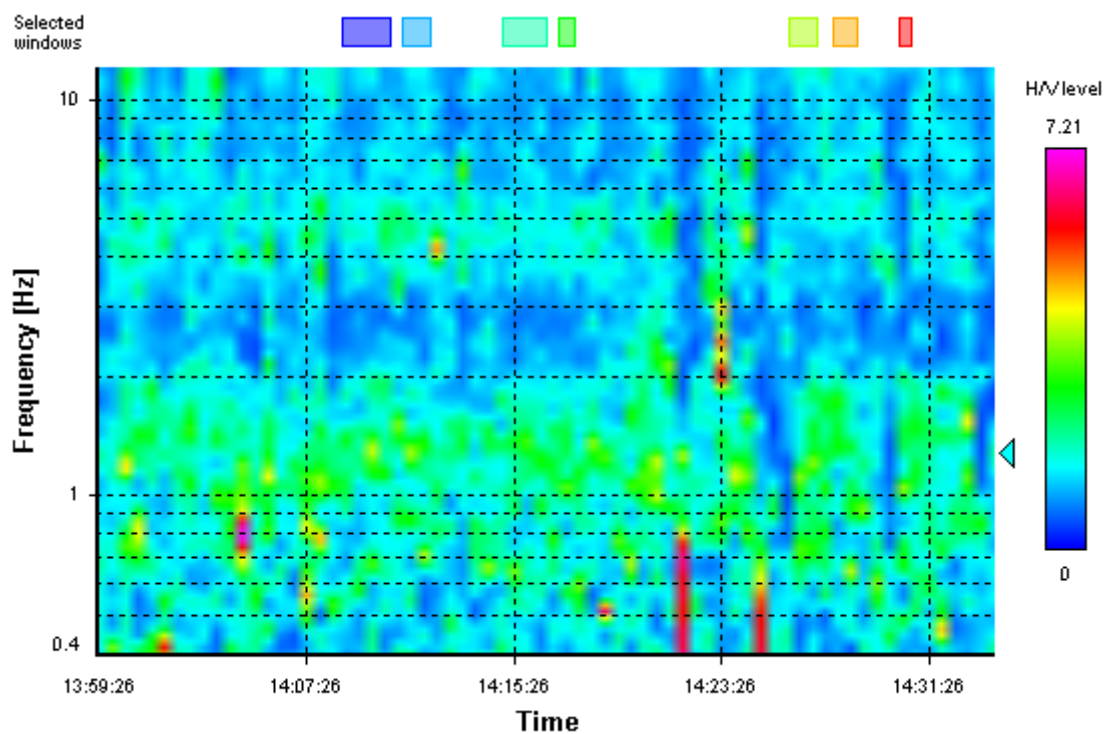
HVSR average



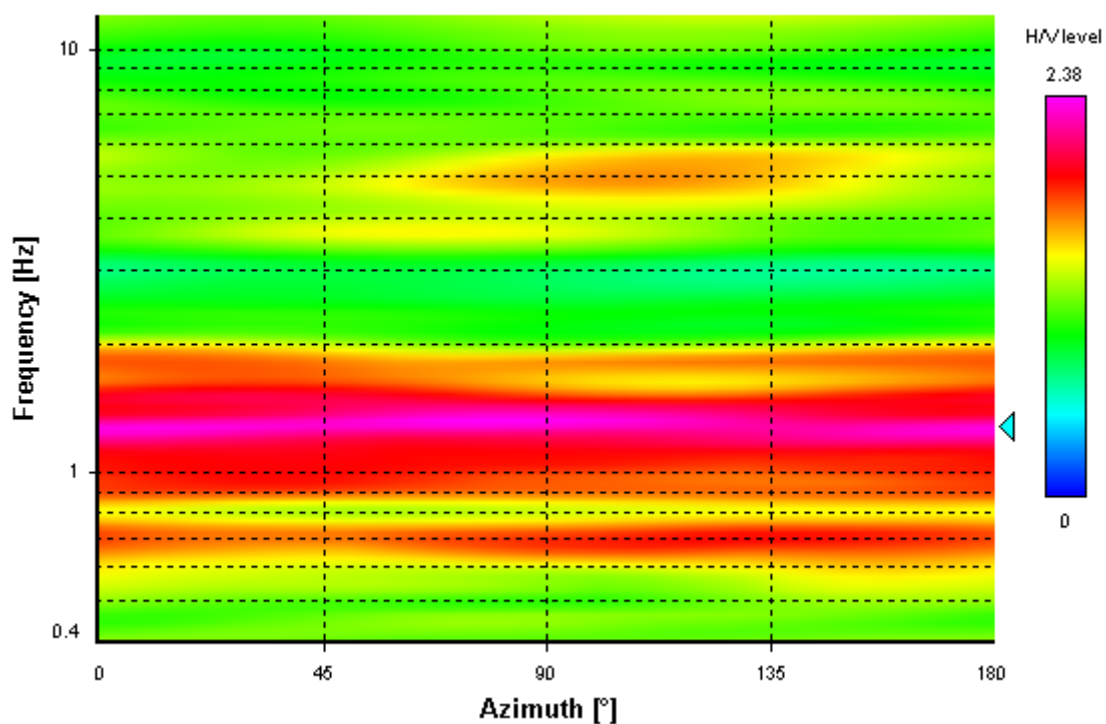
Signal spectra average



HVSR time-frequency analysis (30 seconds windows)



HVSR directional analysis



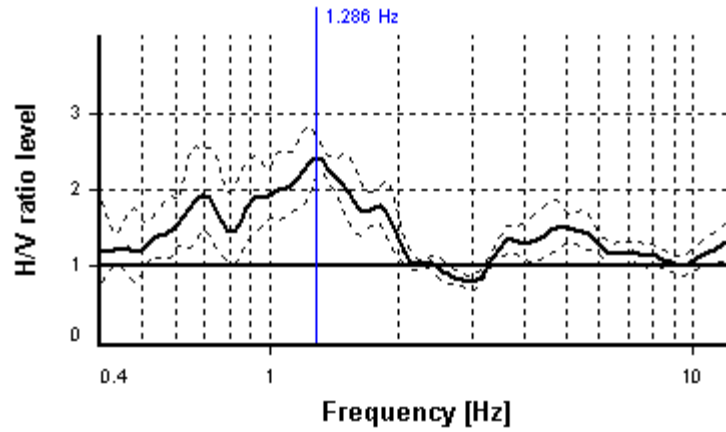
SESAME CRITERIA

Selected f_0 frequency

1.286 Hz

A_0 amplitude = 2.428

Average $f_0 = 1.249 \pm 0.224$



HVSR curve reliability criteria		
$f_0 > 10 / L_w$	7 valid windows (length > 7.77 s) out of 7	OK
$n_c(f_0) > 200$	609.23 > 200	OK
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$	Exceeded 0 times in 41	OK
HVSR peak clarity criteria		
$\exists f \text{ in } [f_0/4, f_0] \mid A_{H/V}(f) < A_0/2$	0.49157 Hz	OK
$\exists f^+ \text{ in } [f_0, 4f_0] \mid A_{H/V}(f^+) < A_0/2$	2.08085 Hz	OK
$A_0 > 2$	2.43 > 2	OK
$f_{\text{peak}}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	3.5% <= 5%	OK
$\sigma_f < \varepsilon(f_0)$	0.22385 >= 0.12863	NO
$\sigma_A(f_0) < \theta(f_0)$	1.11631 < 1.78	OK
Overall criteria fulfillment		OK

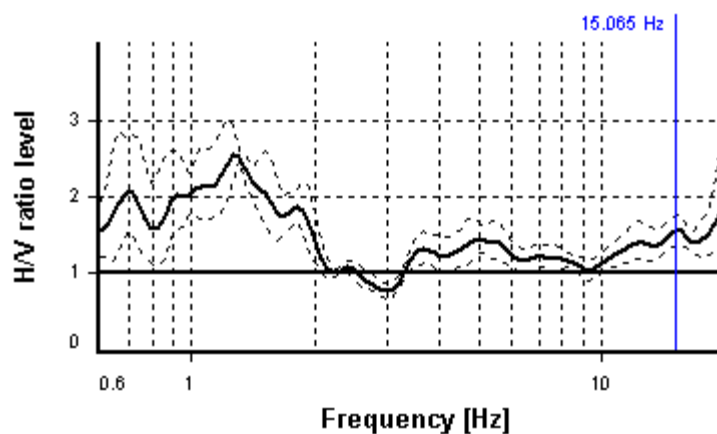
SESAME CRITERIA

Selected f_0 frequency

15.065 Hz

A_0 amplitude = 1.565

Average $f_0 = 18.301 \pm 1.610$



HVSR curve reliability criteria		
$f_0 > 10 / L_w$	5 valid windows (length > 0.66 s) out of 5	OK
$n_c(f_0) > 200$	3873.36 > 200	OK
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$	Exceeded 0 times in 28	OK
HVSR peak clarity criteria		
$\exists f \text{ in } [f_0/4, f_0] \mid A_{H/V}(f) < A_0/2$	0 Hz	NO
$\exists f^+ \text{ in } [f_0, 4f_0] \mid A_{H/V}(f^+) < A_0/2$	0 Hz	NO
$A_0 > 2$	1.57 <= 2	NO
$f_{\text{peak}}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	28.14% > 5%	NO
$\sigma_f < \varepsilon(f_0)$	1.61013 >= 0.75325	NO
$\sigma_A(f_0) < \theta(f_0)$	1.13036 < 1.58	OK
Overall criteria fulfillment		NO