



Caratterizzazione della Risposta sismica dei Siti Permanenti della rete sismica

CRISP

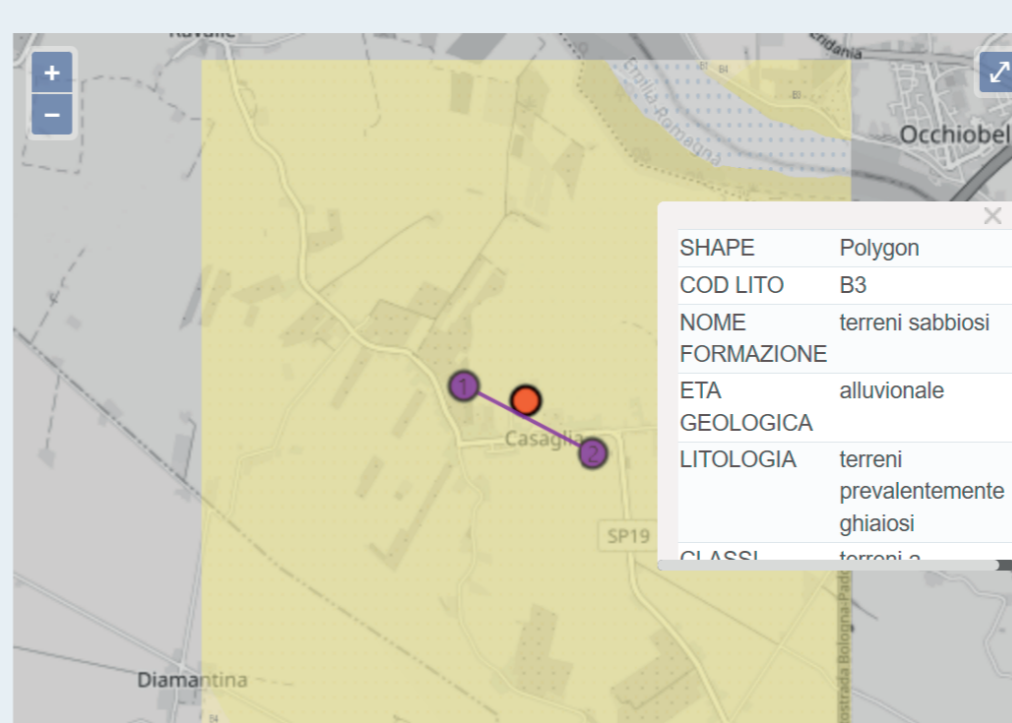
Site characterization of the permanent seismic stations

Site FERS

FERS

Casaglia, Ferrara

Id:	112
Spatial Reference System:	GCS_WGS_1984
Latitude [°]:	44.903588
Longitude [°]:	11.540541
Elevation [m]:	7
StartTime:	08/02/2013 15:00:00
EndTime:	
Type:	PERMANENT
Description:	Casaglia, Ferrara
Site Name:	FERS
Sensor and digitizer:	EPISENSOR-FBA-ES-T-CL-2G-FS-40-VPP(ACC); GAIA2-FS-40-VPP(DIG);



Map Layer (100k and 50k from <https://www.isprambiente.gov.it>)

- Foglio FERRARA - Carta Geologica d'Italia 1:50,000_1
- Foglio Carta Litologica d'Italia 1:100,000 - Foglio FERRARA_2
- Foglio FERRARA - Carta Geologica d'Italia 1:100,000_3
- Stratigraphy Layer
- CrossSection Layer
- SubSoil Layer

Housing

INSTRUMENT HOUSING

Picture Sensor	Picture Site	Picture Panorama	Coupling	Insulating	Housing	Note	Noise source
			PILLAR	MEDIUM	FREE FIELD	The station is placed near the cemetery wall. From Febr. 2013, only accelerometer is present	3

DATA QUALITY

No Data Available

Geology

STRATIGRAPHY

Site name	Reference System	Latitude [°]	Longitude [°]	Drilling ID	Depth [m]	Elevation [m]	Source:	Site Distance [m]	Drilling Date
FERS	GCS_WGS_1984	44.903574	11.540505	185070P503	135	7	Geological database of the Emilia-Romagna Region - https://ambiente.regione.emilia-romagna.it/it/geologia/cartografia/webgis-banchedati/banca-dati-geognostica	8	

GEOLOGICAL REVIEW

Bibliography	Monography	Conceptual model strata
Minarelli L., Geological report at the seismic station IV.FERS - Casaglia, Ferrara , Working group INGV "Agreement DPC-INGV 2019-21, All.B2- WP1, Task 2" (2019)		0
Monti G. M., Martarelli L., Gafa R. M., Olivetta L., Caratterizzazione geologica dei siti su cui ricadono le stazioni della Rete Sismica Nazionale dell'INGV , INGV-ISPRA 2016-17 Agreement (protocol INGV 2016/0003777 of 04/04/2016): "Scientific and technical collaboration aimed at the geolithological characterization of the sites of the stations of the national INGV seismic network" (Scientific Coordinators: P. Bordini and G.M. Monti) (2016)		5

MORPHOLOGICAL CLASSIFICATION

Cartography Title	Type	Note	Dem Resolution [m]	Slope Range	Slope[°]	Slope Range Figure
	BASIN		30.00000	ANGLE_LE15	0.34000	
	BASIN		10.00000	ANGLE_LE15	0.11000	

LITHOLOGICAL CLASSIFICATION

Cartography Title	Coding type	Lithological Unit Code	Volumetric Joint Count	Consolidation Degree	Lithologic Class	Lithologic Description	Number Of Lithology Subdivision
Foglio Carta Litologica d'Italia 1:100,000 - Foglio FERRARA	ISPRA 2010	B3		Unconsolidated	Sand-gravel	terreni a granulometria grossolana (g), media-grossolana (m+g)	3

GEOLOGICAL CLASSIFICATION

Cartography Title	Coding type	Geological unit code	Geological units	Environmental settings	Age (Older - Younger)	Rock mass structure	Event Process
Foglio FERRARA - Carta Geologica d'Italia 1:100,000	ISPRA 2010	GU_0760001_191	terreni prevalentemente ghiaiosi	floodplain_setting	Quaternary - Quaternary	missing	depositionFromFluid

FAULT CLASSIFICATION

No Data Available

LANDSLIDE CLASSIFICATION

No Data Available

CROSS SECTION

Cartography	Geological Cross Section	Latitude 1 [°]	Longitude 1 [°]	Latitude 2 [°]	Longitude 2 [°]	Spatial Ref Sys
Foglio FERRARA - Carta Geologica d'Italia 1:100,000		44.904608	11.534829	44.90016	11.546871	GCS_WGS_1984

Seismology

HVEQ

No Data Available

HVNOISE

Start time	End time	Noise variability types	Frequency range min [Hz]	Frequency range max [Hz]	Band Instrument	Picture of rotated ratio	Picture of ratio	Number of peaks
08/07/2016 00:00:00	09/07/2016 00:00:00		0.1	15	EH			1

SSREQ

No Data Available

SIGNAL POLARIZATION

Type	Start time	End time	Frequency range min [Hz]	Frequency range max [Hz]	Band Instrument	Picture ellipticity	Picture dip	Picture strike	Number of peaks	Number of earthquake
Noise	08/07/2016 00:00:00	09/07/2016 00:00:00	0.1	15	EH				2	0

Geophysics

SUBSOIL MODEL

id	Type	Investigation	Pref.	Latitude [°]	Longitude [°]	Elevation [m]	Figure	Monography
40	VELOCITY_PROFILE	CH	YES	44.903574	11.540505	10		

Site Classification

TOPOGRAPHY CLASS

Topography Class Type	Topography Class Value	Topography Class Preferred	Topography Class Note	Seismic Code Type	Bibliography	Last Update
DEM	T1	Yes	dem_10m	EC8	Pessina, Vera and Fiorini, E., A GIS procedure for fast topographic characterization of seismic recording stations , Soil Dynamics and Earthquake Engineering, (2014)	2022-02-10 10:17:23
DEM	T1	No	dem_30m	EC8	Pessina, Vera and Fiorini, E., A GIS procedure for fast topographic characterization of seismic recording stations , Soil Dynamics and Earthquake Engineering, (2014)	2022-02-10 10:17:36
OTHER	T1	No	GoogleEarth	EC8		2022-02-10 10:17:49

SITE CLASS

Soil Class Type	Soil Class Value	Soil Class Preferred	Soil Class Note	Seismic Code Type	Bibliography	Last Update
GEOLOGY	D	No	from di Capua et al. 2016	EC8	Di Capua G., Peppoloni S., Amanti M., Cipolloni C., Conte G., Site classification map of Italy based on surface geology , Geological Society, London, Engineering Geology Special Publications, (2016)	2022-02-15 10:24:06
CROSSHOLE	C	Yes	Vseq =184 m/s derived from the bibliography velocity profile	NTC18	Laurenzano G., Priolo E., Barnaba C., Gallipoli M. R., Klin P., Martelli L., Mucciarelli M., Romanelli M., Studio sismologico per la caratterizzazione della risposta sismica di sito ai fini della microzonazione sismica di alcuni comuni della regione Emilia-Romagna , . Rel. OGS 2013/74 Sez. CRS 26, dd. 31 luglio 2013, (2013)	2022-02-15 10:24:07
CROSSHOLE	C	Yes	Vs30=184 m/s	EC8	Laurenzano G., Priolo E., Barnaba C., Gallipoli M. R., Klin P., Martelli L., Mucciarelli M., Romanelli M., Studio sismologico per la caratterizzazione della risposta sismica di sito ai fini della microzonazione sismica di alcuni comuni della regione Emilia-Romagna , . Rel. OGS 2013/74 Sez. CRS 26, dd. 31 luglio 2013, (2013)	2022-02-15 10:24:09