



# NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),  
Proposed Sites for Community Importance (pSCI),  
Sites of Community Importance (SCI) and  
for Special Areas of Conservation (SAC)

SITE IT5170102  
SITENAME Campi di alterazione geotermica di M.Rotondo e Sasso Pisano

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## 1. SITE IDENTIFICATION

1.1 Type	1.2 Site code	<a href="#">Back to top</a>
B	IT5170102	

### 1.3 Site name

Campi di alterazione geotermica di M.Rotondo e Sasso Pisano
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1.4 First Compilation date	1.5 Update date
2012-10	2019-12

### 1.6 Respondent:

Name/Organisation:	Regione Toscana - Direzione Ambiente ed Energia - Settore Tutela della Natura e del Mare
Address:	Via di Novoli, 26 - 50127 Firenze
Email:	parchiareeprotette_biodiversita@regione.toscana.it

### 1.7 Site indication and designation / classification dates

Date site classified as SPA:	0000-00
National legal reference of SPA designation	No data
Date site proposed as SCI:	2012-10
Date site confirmed as SCI:	No data
Date site designated as SAC:	2016-05
National legal reference of SAC designation:	DM 24/05/2016 - G.U. 139 del 16-06-2016

## 2. SITE LOCATION

### 2.1 Site-centre location [decimal degrees]:

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Longitude 10.857      Latitude 43.16

### 2.2 Area [ha]:      2.3 Marine area [%]

121.0      0.0

### 2.4 Sitelength [km]:

0.0

### 2.5 Administrative region code and name

NUTS level 2 code	Region Name

2.6 Biogeographical Region(s)

Mediterranean (100.0 %)

3. ECOLOGICAL INFORMATION

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3.1 Habitat types present on the site and assessment for them

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A B C D	A B C		
						Representativity	Relative Surface	Conservation	Global
4030			3.22		M	B	C	B	C
8320			8.53		M	A	C	A	A
9260			68.83		M	C	C	C	C
9330			3.02		M	D			

- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D. qual.	A B C D	A B C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A246	<a href="#">Lullula arborea</a>			p				R	DD	D			

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

3.3 Other important species of flora and fauna (optional)

Species					Population in the site				Motivation					
Group	CODE	Scientific Name	S	NP	Size		Unit	Cat.	Species Annex		Other categories			
					Min	Max		C R V P	IV	V	A	B	C	D
P		<a href="#">Agrostis castellana</a>						P						X
P		<a href="#">Calluna vulgaris</a>						P						X
P		<a href="#">Campylopus pilifer</a>						P						X
P		<a href="#">Deschampsia flexuosa</a>						P						X
B	A096	<a href="#">Falco tinnunculus</a>						P						X

- **Group:** A = Amphibians, B = Birds, F = Fish, Fu = Fungi, I = Invertebrates, L = Lichens, M = Mammals, P = Plants, R = Reptiles
- **CODE:** for Birds, Annex IV and V species the code as provided in the reference portal should be used in addition to the scientific name
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Unit:** i = individuals, p = pairs or other units according to the standard list of population units and codes in accordance with Article 12 and 17 reporting, (see [reference portal](#))
- **Cat.:** Abundance categories: C = common, R = rare, V = very rare, P = present
- **Motivation categories:** IV, V: Annex Species (Habitats Directive), A: National Red List data; B: Endemics; C: International Conventions; D: other reasons

4. SITE DESCRIPTION

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4.1 General site character

Habitat class	% Cover

N16	65.0
N18	5.0
N09	5.0
N08	10.0
N22	15.0
Total Habitat Cover	100

Other Site Characteristics

Aree geotermali non utilizzate a fini produttivi, di interesse paesaggistico.

4.2 Quality and importance

L'area mostra un singolare paesaggio geologico dove affiorano le rocce permeabili del serbatoio geotermico (calcarei e diaspri) che consentono ai fluidi di dare luogo a vistose manifestazioni endogene naturali. La temperatura del suolo, che a 30cm di profondità raggiunge circa 60°, non consente alle specie arboree di sviluppare normalmente l'apparato radicale. L'acidità del substrato e i suoli molto poveri risultano proibitivi per la maggior parte delle specie. In queste condizioni le piante si selezionano soprattutto in funzione del calore e dell'acidità del suolo. Dove le emissioni sono intense non sono presenti forme di vita vegetale, dove sono deboli, ma il suolo rimane fortemente acido, le uniche specie che si sviluppano sono comunità briofitiche, arbusti quali il brugo (*Calluna vulgaris*) e la graminacea *Agrostis castellana*. Quando gli effetti del vapore si attenuano e il suolo può ancora risultare più caldo la vegetazione è caratterizzata da altre graminacee e specie sempreverdi mediterranee, come le eriche (*Erica arborea*), i cisti (*Cistus salvifolius*), e la sughera (*Quercus suber*) unica pianta arborea che cresce vicino alla zona di emissione. Nelle aree esterne alle manifestazioni abbiamo querceti dominati dal cerro e castagneti. Solo il riscaldamento provocato localmente dalle emissioni consente infatti la permanenza dei lembi di vegetazione sempreverde mediterranea. L'area è di straordinaria importanza in particolare per la conservazione delle formazioni di brughiera, i prati paucispecifici pionieri dei campi di alterazione geotermica con suoli caldi ed iperacidi (*Agrostis castellana*), *Deschampsia flexuosa* ed *Holcus lanatus*), le popolazioni eterotopiche di sughera e le popolazioni di *Quercus crenata*.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]
H	C03.01		b
M	K02		i
H	G01.03.02		i
H	A04.01		b
M	B02		i

Rank: H = high, M = medium, L = low  
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,  
T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions  
i = inside, o = outside, b = both

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside /outside [i o b]

4.4 Ownership (optional)

Type		[%]
Public	National/Federal	0
	State/Province	0
	Local/Municipal	0
	Any Public	0
Joint or Co-Ownership		0
Private		100
Unknown		0
sum		100

4.5 Documentation

Selvi F., Stefanini P., 2005 - Biotopi naturali e Aree Protette - Quaderni delle Aree Protette - Provincia di Grosseto.

5. SITE PROTECTION STATUS (optional)

5.1 Designation types at national and regional level:

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Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
IT13	100.0	IT11	80.0		

5.2 Relation of the described site with other sites:

5.3 Site designation (optional)

6. SITE MANAGEMENT

6.1 Body(ies) responsible for the site management:

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Organisation:	Regione Toscana
Address:	Via di Novoli, 26 - 50127 Firenze
Email:	parchiareeprotette_biodiversita@regione.toscana.it

6.2 Management Plan(s):

An actual management plan does exist:

☐ Yes

<input type="checkbox"/>	No, but in preparation
<input checked="" type="checkbox"/>	No

6.3 Conservation measures (optional)

7. MAP OF THE SITES

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INSPIRE ID:

Map delivered as PDF in electronic format (optional)

<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
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Reference(s) to the original map used for the digitalisation of the electronic boundaries (optional).