



Gli interventi per la conservazione del Discoglossus sardo (*Discoglossus sardus*)

Conservation efforts for the Discoglossus sardus

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Conferenza finale

Isola del Giglio 23,24 Ottobre 2024



Progetto realizzato con il cofinanziamento della Commissione Europea



Project implemented with co-funding from the European Commission



Discoglossus sardus

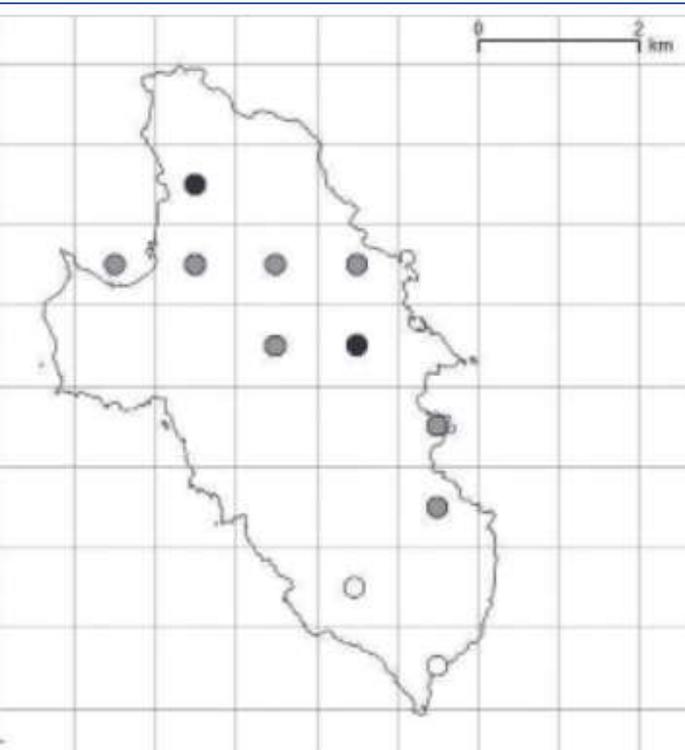
- ✓ Allegato II - Direttiva "Habitat" 92/43/CEE
- ✓ "Vulnerabile" nelle Liste Rosse Italiane IUCN (2022)



Status of the species on small islands:

The populations are threatened by various factors:

- small size of its existing populations.
- water withdrawals from springs and streams
- proliferation of invasive alien species
- climate change



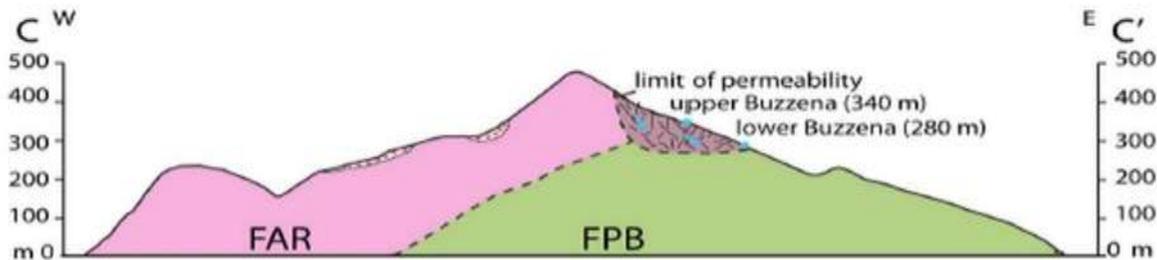
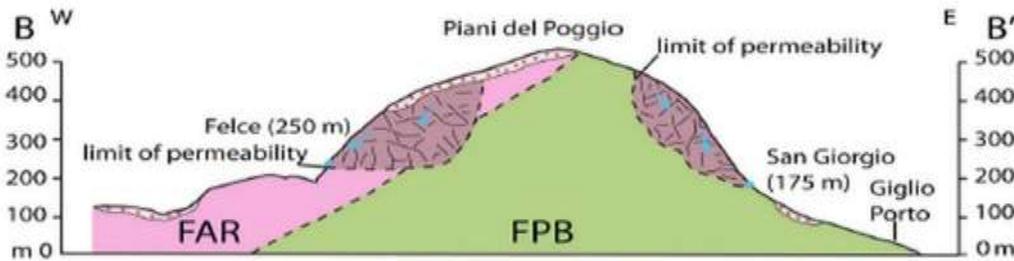
Preparatory analysis

- ✓ Species distribution
- ✓ Climate analysis
- ✓ Analysis of spring flow rates
- ✓ Analysis of critical issues affecting the species



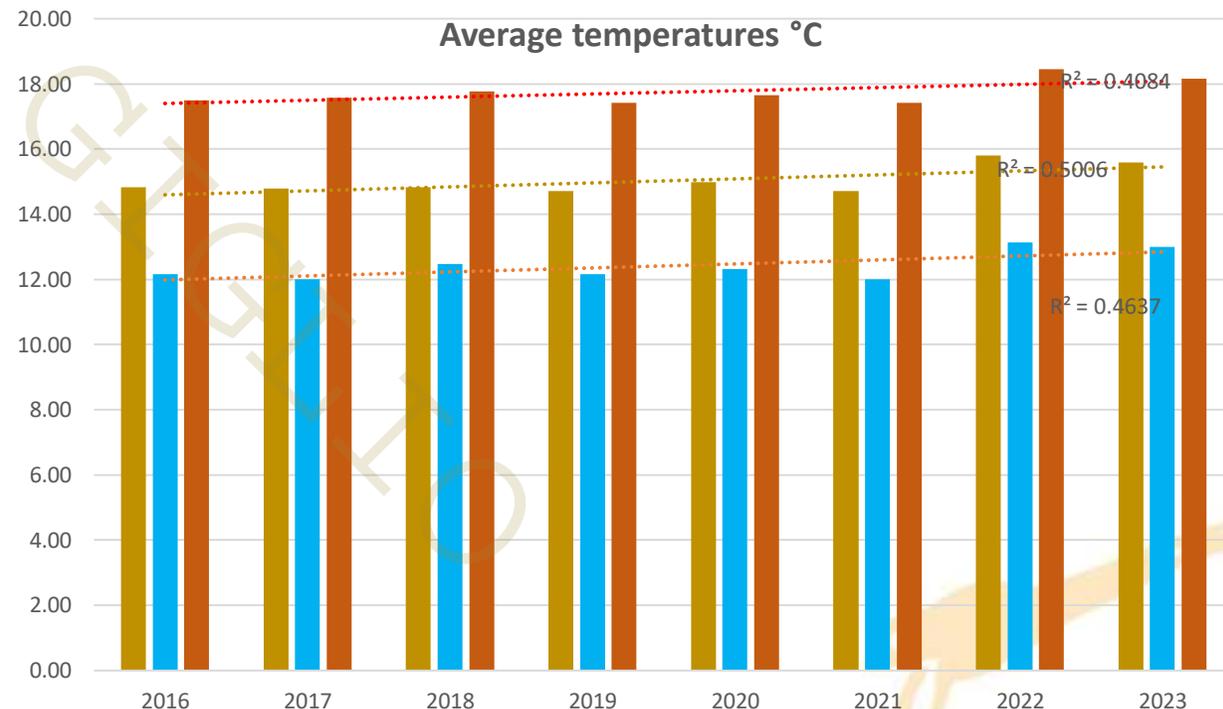
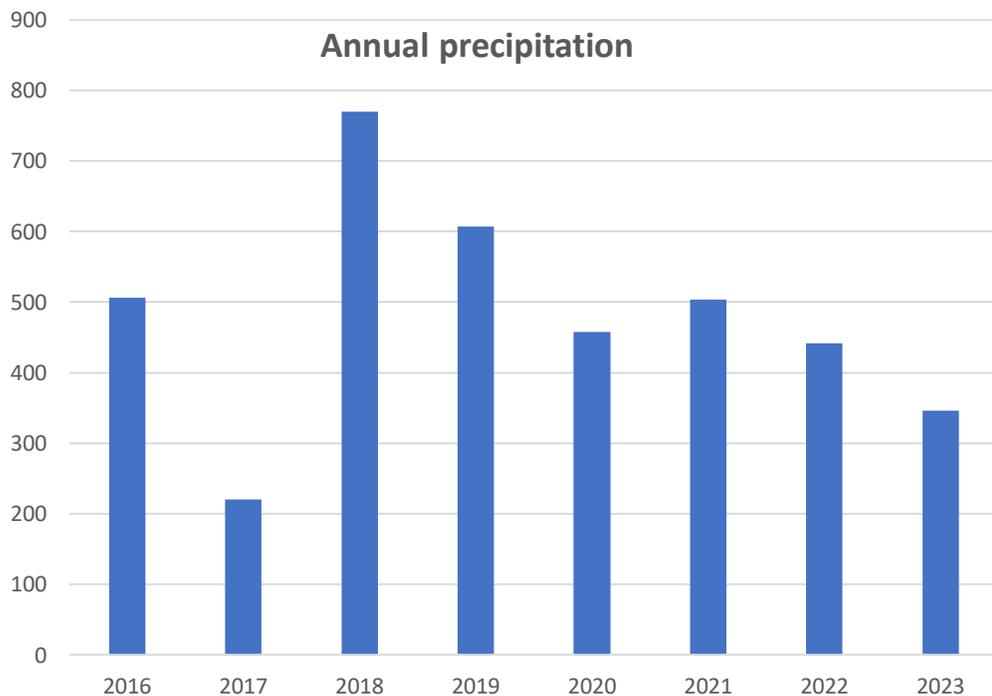


In the past, there were about 14 perennial springs, while today there are 7 perennial springs still active, with limited and seasonally variable flow. There are also other smaller seasonal or intermittent springs. The deep circulation follows the fracture system with presumably short paths (the temperatures of the springs are medium-high, between 15 and 18 °C)

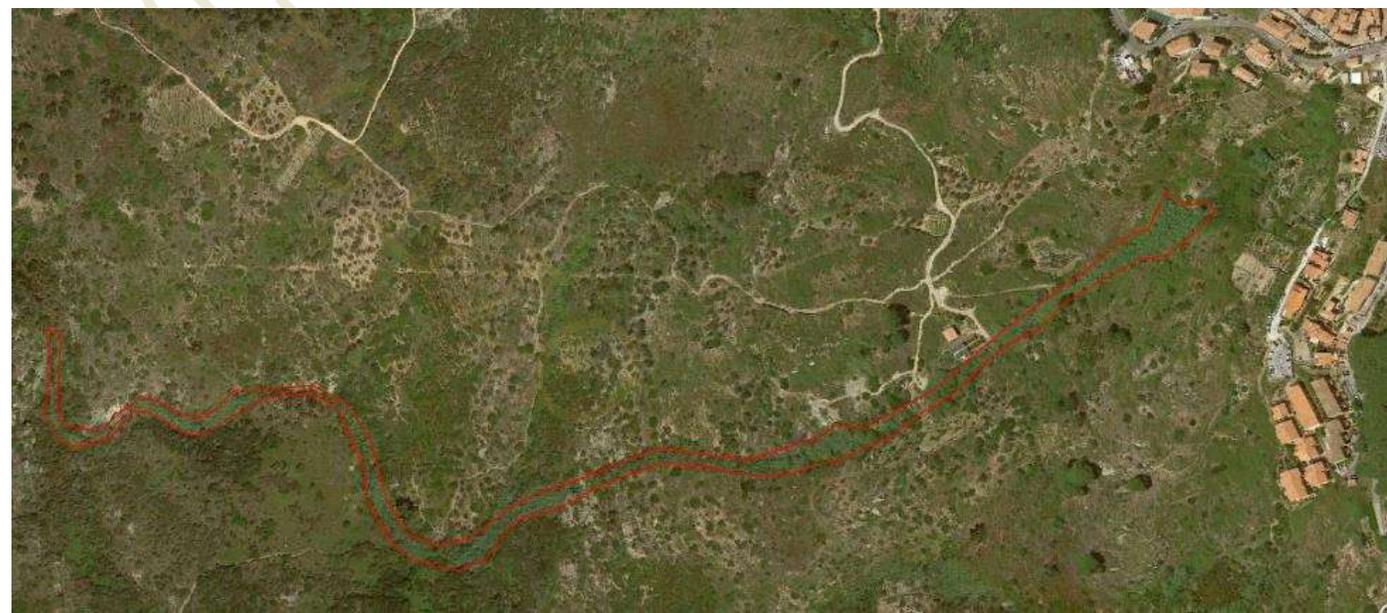
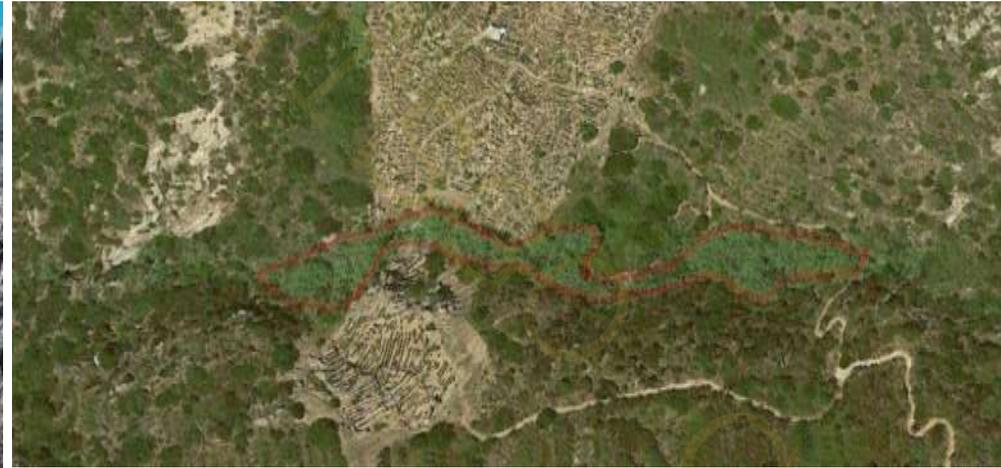


Presence of the species

- ✓ Annual precipitation: 500-600 mm (< 400 mm in one out of eight cases)
- ✓ Between 2012-2021, there has been a reduction in the average annual rainfall from 580 mm to 510 mm
- ✓ Rainfall from April to August during the period 2012-2021 was less than 100 mm (average for the 1958-1986 = 133 mm)
- ✓ A comparison between recent and historical series shows an increase in autumn precipitation and a reduction in all other seasons
- ✓ Increased variability between different years
- ✓ The estimated average annual evaporation is 1033 mm (for the period 2016-2020)



Main pressures for the *Discoglossus sardus* on Giglio island



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Main pressures for the *Discoglossus sardus* on Giglio island



Selection of intervention sites

- ✓ - Presence of the *Discoglossus* confirmed at the site and consequent probability of colonization [DISCO]
- ✓ - Level of water availability throughout the entire year [H2O]
- ✓ - Size/Scope of the intervention [CONS]
- ✓ - Educational/Recreational value of the site [DIDA]
- ✓ - Ease of access and construction logistics [ACC]
- ✓ - Significance of the intervention in relation to the species distribution on the island [AREA]
- ✓ - Implementation complexity [COM]

ID	NOME	DISCO	H2O	CONS	DIDA	ACC	AREA	COM	VALORE	POSIZIONE
01	Mortoieto	+	++	+++	+++	+	++	-	11	1
11	Acqua Selvaggia	+	+++	+	+++	+++	/	-	10	2
12	Fosso del Catinello	+++	+++	++	+	+++	/	--	10	3
02	Valle di Pietrabuona_Vigneto	++	+++	+++		+	+	-	9	4
13	S.Croce	+	++	+	++	+++	/	-	8	5
10	Buzzena	/	+++	+++	++	+	+	--	8	6
04-05-06	L'Altura_1-2-3	/	+	+	/	+++	+++	-	7	7
03	Valle di Pietrabuona_Fosso	+++	+++	++	/	+	+	---	7	8
09	Cotannetta	+	++	++	++	++	+	---	6	9
07	Valle dell'Altura_1	/	+	++	/	++	+++	---	5	10
08	Valle dell'Altura_2	/	+	+	/	++	+++	---	4	11



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11	Acqua Selvaggia	+	+++	+	+++	+++	/	-	10	2
12	Fosso del Catinello	+++	+++	++	+	+++	/	--	10	3
02	Valle di Pietrabuona_Vigneto	++	+++	+++		+	+	-	9	4
13	S.Croce	+	++	+	++	+++	/	-	8	5
10	Buzzena	/	+++	+++	++	+	+	--	8	6
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Types of interventions implemented

The proposed works differ from site to site based on a logic of minimizing environmental and landscape impact, adapting to existing elements and morphological characteristics, with the common goal of creating a water reservoir sized to last several months between spring and summer.

Restoration of existing stone or masonry structures through:

- Waterproofing (using the *cocciopesto* technique)
- Possible enlargement and/or raising of the overflow level
- Experimenting with new materials (e.g. wood) to increase reproductive sites

Total intervention cost: €70,000 + VAT



The tanks construction works were handed over to the contractor at the end of October 2022, but actual works began in January 2023. During this period, the contractor proposed improvements related to the difficulty of accessing certain intervention sites. The contractor proposed using a helicopter to transport the materials needed for the interventions at some areas. This method allowed the Project Management to evaluate and agree with the contractor on some detailed project modifications at the only two privately owned sites, in order to test different types of works. Specifically, the use of helicopters enabled the transport of large, heavy prefabricated structures in concrete or in wood.

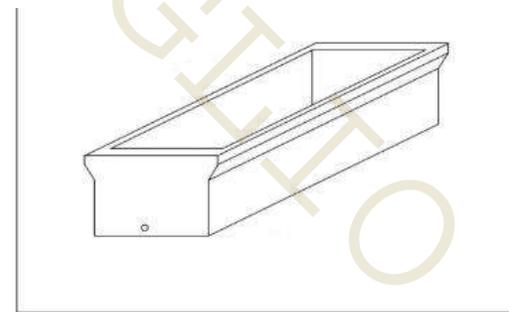
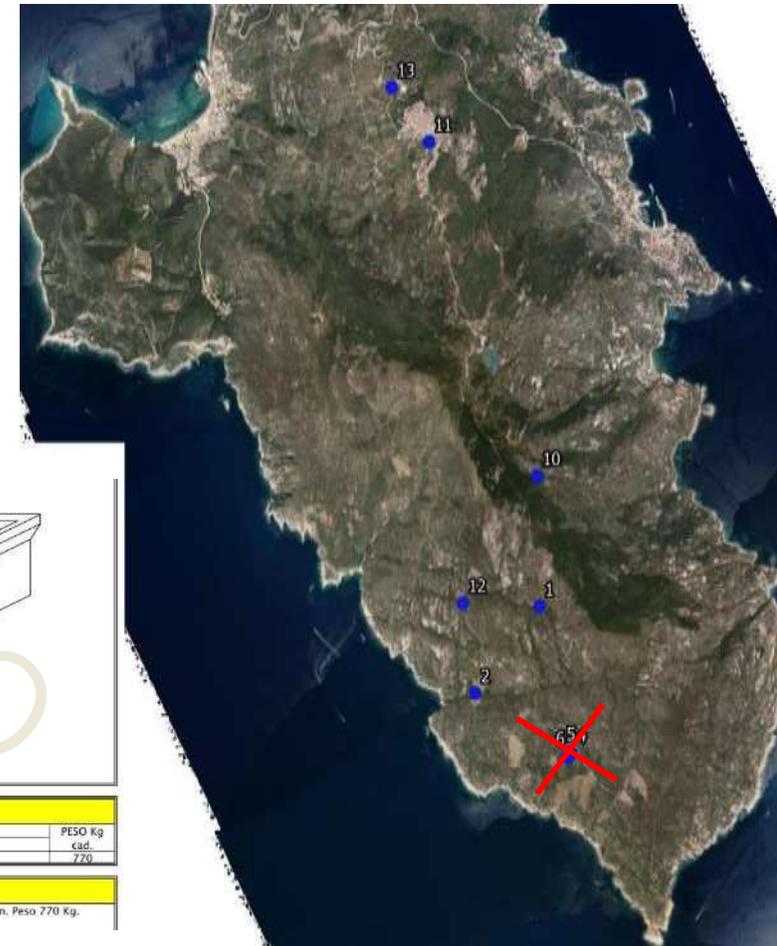


Tabella dimensioni nominali					
CODICE	DIMENSIONI				PESO Kg cad.
	Base	Lunghezza (cm)	H (cm)	S (cm)	
VASCA	45	220	55	8,5	770

Voce di capitolato
 Vasca in calcestruzzo. Dimensioni esterne cm 220 x h 55. Spessore 8,50 cm. Peso 770 Kg. Capacità litri 650

Site: Mortoleto



Site: Acqua Selvaggia



Site: Fosso del Catinello



Site: Valle di Pietrabuona_Vigneto



Site: Santa Croce



Site: Buzzena





Grazie per l'attenzione