

NATURA 2000 - STANDARD DATA FORM

DRAFT exported from Reportnet 3 - [18/12/2025]
Stazioni di Isoetes malinverniana (IT1120026 - SCI)

Table of contents

1.Site identification 2.Site location 3.Ecological information 4.Site description 5.Site protection status
6.Site management 7.Map of the site

1. Site identification

1.1 Site type

B

1.2 Site code

IT1120026

1.3 Site name

Stazioni di Isoetes malinverniana

1.3.1 Site name non-latin alphabet (optional)

1.4 Respondent

1.4.1 Name of the organisation

Regione Piemonte - Direzione Ambiente,
Energia, Territorio - Settore Biodiversità e
Aree Naturali

1.4.2 Contact point in the organisation (optional)

1.4.3 Postal address

Piazza Piemonte, 1 - 10127 Torino

1.4.4 Functional mailbox email address

biodiversita@regione.piemonte.it

1.4.5 Website with contact information

<https://www.regione.piemonte.it/web/temi/ambiente-territorio/biodiversita-aree-naturali/rete-natura-2000>

1.5 Site classification/proposal/designation dates

1.5.1 Date site first classified as SPA

1.5.2 SPA classification act (URI or free text)

1.5.3 Date site first proposed as SCI

2017-05

Date confirmed as SCI

populated by EEA on behalf of the European Commission

1.5.4 Date site designated as SAC

2025-07

1.5.5 SAC designation act (URI or free text)

<https://www.gazzettaufficiale.it/eli/gu/2025/08/23/195/sg/pdf>

1.5.6 Explanations (optional)

2. Site location

2.1 Location calculated by the European Environment Agency

Longitude

calculated by the EEA after release in
Reportnet 3

Latitude

calculated by the EEA after release in Reportnet 3

2.1.1 Area (ha)

2043

2.1.2 Reason for area difference with spatial dataset (if any)

2.1.3 Reason for area difference – explanations

2.2 Administrative region (optional)

2.2.1 Administrative region code	2.2.2 Administrative region name
ITC1	PIEMONTE

2.3 Biogeographical and marine regions

2.3.1 Region code	2.3.2 Percentage	Fully marine SCI/SAC (100 %) must be attributed to a biogeographical
Continental	100	Continental

3. Ecological information

3.1 Habitat types of Annex I of council directive 92/43/EEC present on the site

3.1.a Essential information (habitat type)

Annex I habitat types							
3.1.1		3.1.2	3.1.3	3.1.4	3.1.5	3.1.6	3.1.7
Code	Name	Priority form	Not present	Cover [ha]	Caves [number]	Method cover	Last data collection
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	No		7.2		limited	
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition — type vegetation	No		0.4		complete	
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	No		5.6		complete	
4030	European dry heaths	No		2.1		limited	
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	No		88.2		complete	
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	No		34.3		complete	

Priority Form: For habitat types 6210, 7130, 9430 priority depends on the habitat characteristics. Indicated as Yes/No.

Not Present: Indicates whether the habitat type is no longer present (noLongerPresent) on the site, or its re-establishment is planned (reEstablishment).

Cover: Shows the size of habitat type as decimal values.

Caves: For habitat types 8310 and 8330 (caves), the number of caves can be entered when a surface area is not available or appropriate.

Method used for cover: Method used for cover: complete = complete survey or a statistically robust estimate; limited = based mainly on extrapolation from a limited amount of data; insufficient = insufficient or no data available

Last data collection: Date or period of the last data collection.

3.1.b Site assessment (habitat type)

3.1.1		3.1.2	3.1.8	3.1.9	3.1.10	3.1.12.1	3.1.12.2	3.1.12.3	3.1.13	3.1.14	3.1.15	3.1.16
Code	Name	Priority form	Significance	Representativity	Relative surface	Conservation	Conservation area	Conservation method	Conservation objectives	Objectives further explanation	Global	Update date
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Najasjuncetum	No	significant	B	C Calcolata come rapporto tra il valore di F_3_1_4_habitat_cover e la superficie complessiva nazionale riportata nel V Rapporto ai sensi dell'articolo 17	C					C	202312
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition — type vegetation	No	non-significant									202312

3260	Water courses of plain to montane levels with the Ranunculus fluitans and Callitriche-Batrachion vegetation	No	significant	A	C	C	B	202312
4030	European dry heaths	No	significant	C	C	C	C	202312

9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	No	significant	B	C Calcolata come rapporto tra il valore di F_3_1_4_habitat_cover e la superficie complessiva nazionale riportata nel V Rapporto ai sensi de ll'articolo 17	B	B	202312
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	No	significant	B	C Calcolata come rapporto tra il valore di F_3_1_4_habitat_cover e la superficie complessiva nazionale riportata nel V Rapporto ai sensi de ll'articolo 17	B	B	202312

Priority Form: For habitat types 6210, 7130, 9430 priority depends on the habitat characteristics. Indicated as Yes/No.

Significance: Indicates if the occurrence is significant or not.

Representativity: Degree of representativity of the habitat type on the site: A = excellent; B = good; C = significant

Relative Surface: Area of the site covered by the habitat type in relation to the total area covered by that habitat type within the national territory, assigned to following percentage classes: A1 = 75-100%; A2 = 50-75%; A3 = 25-50%; A4 = 15-25%; B = 2-15%; C = smaller than 2%.

Conservation: Degree of conservation: A = excellent (nearly all of the habitat area in good condition); B = good (most of the habitat area in good condition); C = reduced (most of the habitat area in not good condition); X = unknown (most or all of the habitat area in unknown condition).

Conservation area: Area of conservation degree categories in good (A + B), not good (C), unknown (X) conditions as hectare values.

Conservation method: Method used for degree of conservation: complete = Complete survey or statistically robust estimate in hectares (for example taken from mapping in management plans); limited = Based mainly on extrapolation from a limited amount of data (expert judgement); veryLimited = Based mainly on expert opinion with very limited data (based on partial mapping data); insufficient = Insufficient or no data available.

Conservation objectives: prevent = Prevent deterioration; maintain = Maintain the habitat type's surface area and its good condition; enlarge = Enlarge the area of the habitat type; improve = Improve the habitat type condition; reestablish = Re-establish the habitat type; other = Other.

Global: Global assessment of the habitat type in the site: A = excellent; B = good; C = significant.

Updated date: Date or period of the last update.

3.2 Species referred to in Article 4 of Directive 2009/147/EC and species listed in Annex II to Directive 92/43/EEC present on the site

3.2.a Essential information (species)

Species					Population in the site						
3.2.1	3.2.2		3.2.4	3.2.5	3.2.6	3.2.7.1	3.2.7.1	3.2.7.2	3.2.8	3.2.9	3.2.10
Group	Code	Scientific name	Sensitive	Not present	Type	Size min	Size max	Unit	Abundance	Mehod Populaton size	Last data collection
P	1898	Eleocharis carniolica			p				P	insufficient	
P	1415	Isoetes malinverniana			p	3000	10000	i		complete	
P	1428	Marsilea quadrifolia			p				P	insufficient	

Group: The taxonomic group to which the species belongs: A = Amphibians; B = Birds; F = Fish; Fu = Fungi; I = Invertebrates; L = Lichens; M = Mammals; P = Plants including bryophytes and algae; R = Reptiles.

Sensitive: Species indicated with “true” are classified as sensitive.

Not Present: Indicates whether the species is no longer present (noLongerPresent) on the site, or its re-establishment is planned (reEstablishment).

Type: Population type of species in the site: p = Permanent: to be found throughout the year on the site (non-migratory species, plants, resident population of migratory species); r = Reproducing: uses the site to raise young (e.g. breeding, nesting); c = Concentration: site used for staging or roosting or migration stop/over or for moulting outside the breeding grounds and excluding wintering; w = Wintering: uses the site during the winter.

Unit: The unit of population size values, the standard is i = individuals, p = pairs. For exceptions see reference portal.

Abundance: Abundance category to be provided if no number of population size is available: C = Common; R = Rare, V = Very rare; P = Present.

Method Population size: Method used for population size: complete = complete survey or a statistically robust estimate; limited = based mainly on extrapolation from a limited amount of data; veryLimited = Based mainly on expert opinion with very limited data; insufficient = insufficient or no data available.

Last data collection: Date or period of the last data collection.

3.2.b Site assessment (species)

3.2.1	3.2.2	3.2.3	3.2.6	3.2.11	3.2.12	3.2.13	3.2.14	3.2.15	3.2.15.2	3.2.15.3	3.2.16	3.2.17	3.2.18	3.2.19	3.2.20
Group	Code	Scientific Name	Type	Significance	SPA classification	Population	Population further explanation	Conservation	Conservation occupied % area (optional)	Conservation occupied % class	Conservation objectives	Objectives further explanation	Isolation	Global	Update date
P	1898	Eleocharis carniolica	p	significant		C		C					C	C	202312
P	1415	Isoetes malinverniana	p	significant		A3	Calcolata come rapporto tra la media dei valori di popolazione riportata per il sito e la popolazione complessiva nazionale riportata nel V Rapporto ai sensi dell'articolo 17	C					C	C	202512
P	1428	Marsilea quadrifolia	p	significant		C		C					C	C	202312

Group: The taxonomic group to which the species belongs: A = Amphibians; B = Birds; F = Fish; Fu = Fungi; I = Invertebrates; L = Lichens; M = Mammals; P = Plants including bryophytes and algae; R = Reptiles.

Significance: Indicates if the occurrence is significant or not.

SPA classification: Alndicate if the bird species met the ornithological criteria used to justify SPA classification.

Population: Size and density of the population of the species present on the site in relation to the populations present within national territory, assigned to following percentage classes: A1 = 75-100%; A2 = 50-75%; A3 = 25-50%; A4 = 15-25%; B = 2-15%; C = smaller than 2%.

Conservation: Degree of conservation: A = excellent (nearly all of the habitat occupied by the species has sufficient quality); B = good (most of the habitat occupied by the species has sufficient quality); C = reduced (most of the habitat occupied by the species has non-sufficient quality); X = unknown (most of the habitat occupied by the species has unknown quality).

Conservation objectives: prevent = Prevent deterioration; maintain = Maintain the extent and good quality of the habitat of the species and the population size; enlarge = Enlarge area of the habitat of the species; improve = Improve the quality of the habitat of the species (considering also disturbance and mortality factors); reestablish = Re-establish habitat for the species; increase = Increase the population size; reduce = Reduce pressure on the population (e.g. reduce mortality or disturbance); reestablishPopulation = Re-establish the population at the site; other = Other.

Isolation: Degree of isolation: A = population (almost) isolated, B = population not-isolated, but on the margins of are of distribution, C = population not-isolated within extended distribution range.

Global: Global assessment of the species in the site: A = excellent; B = good; C = significant.

Global: Date or period of the last update.

3.3 Other important species of flora and fauna (optional)

3.3.1 Group	3.3.2 Code	3.3.3 Scientific name	3.3.4 Sensitive	3.3.5 Not present	3.3.6.1 Size min	3.3.6.1 Size max	3.3.6.2 Population unit	3.3.7 Abundance
P		Carex buekii Wimm.		no				P
P	1725	Lindernia procumbens		no				P
P		Peplis portula		no				P
P		Sagittaria sagittifolia L.		no				P
P		Utricularia australis R. Br.		no				P
P		Veronica scutellata L.		no				P
R	1256	Podarcis muralis		no				P

Group: The taxonomic group to which the species belongs: A = Amphibians; B = Birds; F = Fish; Fu = Fungi; I = Invertebrates; L = Lichens; M = Mammals; P = Plants including bryophytes and algae; R = Reptiles.

Code: For Birds, Annex II, IV and V species the code from the official code list as provided in the reference portal..

Sensitive: Species indicated with “true” are classified as sensitive.

Not present: Indicates whether the species is no longer present (noLongerPresent) on the site.

Unit: The unit of population size values, the standard is i = individuals, p = pairs. For exceptions see reference portal.

Abundance: Abundance category to be provided if no number of population size is available: C = Common; R = Rare, V = Very rare; P = Present.

3.3.8 Motivation

Code	Name	H.D. Annex II	H.D. Annex IV	H.D. Annex V	B.D. Annex I	Migrat. birds	CFP prohib.	National red list	EU red list	Global red list	Endemic species	Int. conv.	H.D. Annex I	CWR/ FRG	IAS Union	Other reason
	Carex buekii Wimm.							X								
1725	Lindernia procumbens		X													
	Peplis portula															X
1256	Podarcis muralis		X													
	Sagittaria sagittifolia L.							X								
	Utricularia australis R. Br.							X								
	Veronica scutellata L.															X

Motivation: The motivation for listing additional species: H.D. Annex II = Species of Annex II Habitats Directive in SPA; H.D. Annex IV = Species of Annex IV Habitats Directive; H.D. Annex V = Species of Annex V Habitats Directive; B.D. Annex I = Bird species of Annex I Birds Directive in a pSCI, SCI, SAC; Migratory birds = Migratory bird species in a pSCI, SCI, SAC; CFP prohib. = Prohibited species of Annex I of the Technical Measures Regulation under the common fisheries policy (EU Regulation 2019/1241); Int conv. = Species listed/protected under international Conventions; H.D. Annex I = Typical species of Annex I habitat types; CWR/FRG = Crop Wild Relatives (CWR) / Forest Genetic Resources (FGR); IAS Union = Invasive alien species of Union concern (EU Regulation 1143/2014 on invasive alien species).

4. Site description

4.1 Site characteristics

Il sito è stato istituito per tutelare gli ultimi nuclei superstiti della rarissima *Isoëtes malinverniana* (All. II e IV della Direttiva Habitat), specie endemica della Pianura Padana occidentale (Piemonte e Lombardia), gravemente minacciata di estinzione. L'areale originario comprendeva anche le province di Torino e Biella, dove la specie è attualmente scomparsa. *I. malinverniana* sopravvive nelle province di Vercelli, Novara e Pavia. Anche qui molte delle stazioni note in passato sono estinte o risultano degradate e in via di scomparsa. Nell'ultimo decennio si stima una drammatica riduzione dell'areale globale della specie (88%) e della superficie occupata (30%).

4.2 Quality and importance of the site

Il sito include la maggior parte delle stazioni attuali di presenza della rara pteridofita endemica padana che dà il nome al sito, *Isoetes malinverniana*. E' una specie per cui è stata registrata una significativa contrazione negli ultimi decenni ed è per questo considerata "Criticamente minacciata" nella Lista Rossa italiana e Globale. Il sito è collocato nell'alta pianura novarese e vercellese dove l'uso del suolo, a tessitura prevalentemente argillosa, è destinato in maggioranza alla coltivazione risicola. Il sito è finalizzato a tutelare in primis *Isoetes malinverniana*, specie che vegeta in fontanili, canali e rogge di alimentazione delle risaie dove si associa ad altre specie tipiche dell'habitat 3260. Alcune aree umide che si sviluppano sui suoli argillosi ospitano altre specie rare tutelate dalla Direttiva Habitat quali *Eleocharis carniolica*, *Marsilea quadrifolia*, *Lindernia procumbens*. La ZSC comprende anche il sito detto "baraggione di Villarboit" che ospita vegetazione di brughiera (habitat 4230) e altre specie rare e minacciate tipiche di ambienti umidi. La forte pressione delle attività agricole estensive ed in particolare la risicoltura, può compromettere nel breve periodo la conservazione di specie e habitat quando non mitigata dall'adozione di misure di conservazione adeguate.

4.3 Pressures on the site

4.3.1 Pressure code	4.3.2 Rank	4.3.3 Location	4.3.4 Further details
PA02	medium	in	
PA05	low	in	
PA10	medium	in	
PA13	medium	in	
PA14	medium	in	
PA21	low	in	
PI01	low	in	
PM07	medium	in	

Pressure code: Pressure code

Rank: Relative importance of a pressure in the categories high, medium, low.

Location: Indicates where the pressure is located: in = within the site; out = outside of the site; inout = within and outside of the site.

4.3.5 Last update of the information on the pressures on the site

202512

4.4 Documentation

Il formulario è stato compilato utilizzando fonti di dati floristici e vegetazionali derivanti dalle pubblicazioni sotto elencate e da rilievi effettuati da: Adriano Soldano, Alberto Selvaggi, Chiara Minuzzo, Elena Barni, Edoardo Martinetto BIBLIOGRAFIA Barni E., Minuzzo C., Siniscalco C., Gatto F., Abeli T., Amosso C., Rossi G., Gentili R., Pistoja F. & Soldano A., 2010 - *Isoëtes malinverniana* Ces. et De Not. Inf. Bot. It. 42 (2): 602-604. Desfayes M., 2005 - Données floristiques pour le Piémont et ses rizières, et pour la Lombardie voisine: plantes aquatiques et palustres. Riv. Piem. St. Nat., 26, 2005: 73-100. Minuzzo C., Barni E., Selvaggi A., Forte T., Siniscalco C., 2016 - *Isoëtes malinverniana* Ces. & De Not. In: Ercole S., Giacanelli V., Bacchetta G., Fenu G., Genovesi P. (ed.). Manuali per il monitoraggio di specie e habitat di interesse comunitario (Direttiva 92/43/CEE) in Italia: specie vegetali. ISPRA, Serie Manuali e linee guida, 140/2016. Minuzzo C., Soldano A. & Martinetto E., 2011 - Nota floristica piemontese n. 355: *Isoëtes malinverniana* Ces. & DN. (Isoëtaceae). In: Selvaggi A., Soldano A. & Pascale M. (eds.). Note floristiche piemontesi n. 309-392: 394. Riv. Piem. St. Nat. 32. Minuzzo C., Soldano A. & Martinetto E., 2011 - Nota floristica piemontese n. 355: *Isoëtes malinverniana* Ces. & DN.

(Isoëtaceae). In: Selvaggi A., Soldano A. & Pascale M. (eds.). Note floristiche piemontesi n. 309-392: 394. Riv. Piem. St. Nat. 32. Selvaggi A., Minuzzo C. & Eusebio Bergò P., 2015 - Nota floristica piemontese n. 657: Isoëtes malinverniana Ces. & DN. (Isoëtaceae). In: Selvaggi A., Soldano A., Pascale M., Dellavedova R. (eds.). Note floristiche piemontesi n. 604-705: 304. Riv. Piem. St. Nat. 36. Sindaco R., Mondino G.P., Selvaggi A., Ebone A., Della Beffa G., 2003 - Guida al riconoscimento di Ambienti e Specie della Direttiva Habitat in Piemonte. Regione Piemonte. Soldano A. & Badino A., 1990 - Nuove stazioni di Isoëtes malinverniana Cesati e De Notaris nel vercellese. Tipificazione (Pteridophyta, Isoëtaceae). Riv. Piem. St. Nat. 11: 65-69. Soldano A. & Minuzzo C., 2014 - L'Isoëtes di Alessio Malinverni: le vicende d'un appassionato di Botanica, della preziosissima pianta che scoprì e del territorio in cui ha vegetato. Natura e Montagna 61(2): 30-40. Soldano A., Minuzzo C., Fonio G., 2009 - Note floristiche piemontesi n.198 Isoetes malinverniana Ces. & De Not. (Isoetaceae), in Selvaggi A., Soldano A., Pascale M. e Pascal R. (eds.). Riv. Piem. St. Nat., n.30:313-340.

4.4.1 Link(s)

4.4.2 Last update of the documentation information
202312

5. Site management

5.1 Body responsible for the site management

5.1.1 Name of the organization
Regione Piemonte- Settore Biodiversità e Aree naturali

5.1.2 Contact point in the organisation (optional)
No information provided

5.1.3 Postal address
Piazza Piemonte, 1 - 10127 Torino

5.1.4 Functional mailbox email address
biodiversita@regione.piemonte.it

5.1.5 Website with contact information
No information provided

5.2 Management plans

5.2.1 Existence of management plan(s)
Preparation

5.2.2 Reference and validity of the management plan(s)

Name of the plan	Link to the plan (URI)	Validity of the plan (start date)	Duration (number of months)
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5.2.3 Further explanations

5.3 Conservation measures

5.3.1 Detailed information on measures

Necessary conservation measures are included in the management plan(s)

Necessary conservation measures are described in the following document(s)

5.3.1.b Title	5.3.1.c Link to online resource
Deliberazione n.10-398/2024/XII del 21/11/2024	https://www.regione.piemonte.it/governo/bollettino/abbonati/2024/48/atta

Further explanations on detailed conservation measures
- Misure di conservazione per la tutela della Rete Natura 2000 del Piemonte - approvate con DGR 55-7222/2023/XI del 12 luglio 2023 - Format Obiettivi e Misure di conservazione sito-specifiche approvati con Deliberazione n.10-398/2024/XII del 21/11/2024

5.3.2 Status of conservation measures

Are the necessary measures established? Are the established measures implemented?

5.4 Management effectiveness

Is the effectiveness of the conservation measures periodically assessed?

Further explanations on detailed conservation measures

6. Geospatial representation of the site

6.1 INSPIRE identifier

6.1.1 Namespace

6.1.2 Local identifier

6.1.3 Version identifier (optional)