

Ramsar Information Sheet

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Switzerland Vadret da Roseg



Designation date 2 February 2005
Site number 1446
Coordinates 46°24'27"N 09°51'16"E
Area 383,00 ha

https://rsis.ramsar.org/ris/1446 Created by RSIS V.1.6 on - 18 May 2020

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Vadret da Roseg is a typical glacier foreland formed by the two glaciers Vadret da Roseg and Vadret da Tschierva. It is situated at an altitude between 2,000 and 2,800 meters asl and encompasses a total area of 383 ha. The Site is characterized by a lake and the meanders of the melt water stream Ova da Roseg.

The melt water stream with its natural dynamic and the constantly changing meander network create a highly diverse mosaic of successional stages of plant communities that are typical of alpine alluvial zones.

The vegetation encountered at the site ranges from pioneer associations on raw ground up to early stages of larch and pine forests. Rare alpine plant communities include among others pioneer vegetation on gravel (Epilobion fleischeri), alpine grasslands, pioneer groups of sedge (Carex bicolor), early stage of larch and Swiss stone pine forest as well as initial stage of mires (Caricion nigrae) along riverbanks. The Site is home to a rich and diverse wetland flora and fauna with six plant and 14 animal species listed on the red lists of endangered species in Switzerland. The Site is susceptible to impacts of climate change.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Dr. Reinhard Schnidrig
Institution/agency	Federal Office for the Environment FOEN
Postal address	Federal Office for the Environment FOEN Species, Ecosystems, Landscapes Division CH-3003 Bern
E-mail	reinhard.schnidrig@bafu.admin.ch
Phone	+41 58 463 03 07
Fax	+41 58 463 89 74

2.1.2 - Period of collection of data and information used to compile the RIS

From year 2005

To year 2014

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Vadret da Roseg

2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A Changes to Site boundary Yes O No

(Update) B. Changes to Site area No change to area

2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<2 file(s) uploaded>

Former maps 0

Boundaries description

The boundary of the Ramsar site largely corresponds to the boundary of a site protected by virtue of the Ordinance on the protection of alluvial zone of national importance (i.e. site no 1235, Vadret da Roseg) with exception of the rocky and moraine landscape south of lake "Lej da Vadret" not included in the Ramsar site.

2.2.2 - General location

a) In which large administrative region does the site lie?

Grisons

b) What is the nearest town or population centre?

Town: Pontresina. Cantonal dministrative capital GR: Chur

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes O No

O

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?

2.2.4 - Area of the Site

Official area, in hectares (ha): 383

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Freshwater Ecoregions of the World (FEOW)	Central and western Europe

Other biogeographic regionalisation scheme

Biogeographic regions of Switzerland. Federal Office for the Environment FOEN, 2001.

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Other reasons

As a mountain wetland, the site belongs to wetlands currently under-represented in the Ramsar List. (Resolution VIII.12: Enhancing the wise use and conservation of mountain wetlands). Wetlands of glacier forelands and of mountain alluvial zones are vulnerable and threatened by river corrections, constructions, gravel quarrying and hydroelectric power exploitation. The site includes glacier forelands, a lake formed on the foreland following the filing of a moraine, and an alluvial zone, crossed by the torrent Ova da Roseg with a high natural dynamic.

☑ Criterion 2 : Rare species and threatened ecological communities

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Botrychium lanceolatum	Lance-leaf Grapefern	V					CR (National Red List Ferns and Flowering Plants 2002)	
Botrychium simplex	Least Grapefern	Ø					CR (National Red List Ferns and Flowering Plants 2002)	
Carex maritima	Curved Sedge	Ø					VU (National Red List Ferns and Flowering Plants 2002)	
Juncus arcticus	Arctic Rush	2					VU (National Red List Ferns and Flowering Plants 2002)	
Montia fontana	Blinks	Ø			LC Str		EN (National Red List Ferns and Flowering Plants 2002)	
Sedum villosum	Hairy Stonecrop	Ø					VU (National Red List Ferns and Flowering Plants 2002)	

The natural dynamic of the stream and the constant evolution of its meanders network create the conditions for a high biodiversity of vegetation to develop. The site is characterised by an extremely diverse mosaic of dynamic habitats and of various stages of plant successions, which depend particular on the substrate, on moisture and on soil stability, on exposure and on succession time. It includes rare and special alpine species communities.

Therefore, various stages of plant successions from pioneer associations on raw ground up to early stages of larch and pine forest and different types of vegetation developing on wet, moist and even dry grounds.

Plant associations on the site are of rare and threatened groups in Switzerland. In particular arctic relict sedges (Carex bicolor). Plant communities of glacier forelands and of montane alluvial zones are very vulnerable and threatened by river corrections, constructions, gravel quarrying and hydroelectric power explitation.

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	qu u cr	pecies ualifies under iterion 4 6	contributes under	Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Birds													
CHORDATA/ AVES	Actitis hypoleucos	Common Sandpiper	V		00000]	2009		LC ●部			EN (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Aquila chrysaetos	Golden Eagle	Ø		00000]	2013		LC ©SF			VU (National Red List Breeding Birds 2010)	
	Gypaetus barbatus	Bearded Vulture	V				2014		LC ©SF			CR (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Turdus pilaris	Fieldfare	Ø		00000]	2013		LC ©SP			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Turdus torquatus	Ring Ouzel	Ø		00000		2014		LC ©SF			VU (National Red List Breeding Birds 2010)	
Others	Others												
CHORDATA/ MAMMALIA	Mustela nivalis	Least Weasel	Ø.		00000		1994		LC ©SF			Vulnerable (National Red List Mammals 1994)	
	Pseudophilotes baton	Baton Blue	2		00000		1979		LC ●辭			VU (National Red List Butterflies and Burnet Moths 2014)	
CHORDATA/ REPTILIA	Vipera berus	Northern Viper	V				2009					EN (National Red List Reptiles 2005)	

¹⁾ Percentage of the total biogeographic population at the site

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
glacier foreland with alluvial character	☑	Characterised by siliceous rocks associations with gravel pioneer vegetation at different stages (Epilobion fleischeri), alpine grasslands, permanent snow patches, and pioneer groups of sedge (Caricion bicoloriatrofuscae).	The named communities harbor threatened species and are listed in the Ordinance on the Protection of Nature and Cultural Heritage (of 16 January 1991 (Status as of 1 March 2015)) as biotope types preserving protection.
alpine alluvial zone	V	Alluvial zones are dynamic habitats where rivers overflow, submerging dry areas, destroying existing habitats and creating new ones. These dynamic processes are responsible for the extraordinary diversity of species and habitats found there.	Site listed in the inventory of alluvial zones of national importance

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The site is a typical glacier foreland with alluvial character. It is located in a mountain region, characterised by siliceous rocks associations with gravel pioneer vegetation at different stages (Epilobion fleischeri), alpine grasslands, permanent snow patches, and pioneer groups of sedge (Carex bicolor). On the adjacent stable soils, which are in a lesser extent under the influence of the dynamics of the river, groups of dwarf willows and even early stages of larch forests (Larix decidua) and of Swiss stone pine forests (Pinus cembra) are present. Alongside of the river edges, initial stages of mires - Caricion nigrae - and pioneer groups of cotton grass (Eriphoretum scheuchzeri) are found.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> L: Permanent inland deltas		2		
Fresh water > Flowing water >> Mt Permanent rivers/ streams/ creeks		1		
Fresh water > Flowing water >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks		1		
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		1		
Fresh water > Lakes and pools >> P: Seasonal/ intermittent freshwater lakes				
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		3		
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		3		
Fresh water > Marshes on inorganic or peat soils >> Va: Montane wetlands		1		Rare
Fresh water > Flowing water >> Y: Permanent Freshwater springs; oases		4		

Other non-wetland habita

Other non-wetland habitats within the site	Area (ha) if known
Glaciers	
Alpine pastures	
Rocks, high mountains	

(ECD) Habitat connectivity National Ecological Network REN (FOEN): Core connection area

4.3 - Biological components

4.3.1 - Plant species

<no data available>

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	Alectoris graeca	Rock Partridge		2011		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Apus apus	Common Swift		2012		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Carduelis cannabina	Common Linnet		2013		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Cuculus canorus	Common Cuckoo		2013		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Falco tinnunculus	Common Kestrel		2014		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Lagopus muta	Rock Ptarmigan		2013		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Lyrurus tetrix	Black Grouse		2013		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Phoenicurus phoenicurus	Common Redstart		2013		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Sylvia borin	Garden Warbler		2013		High Priority Species (List of National Priority Species 2011)

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dfc: Subarctic (Severe winter, no dry season, cool summer)

Glacier variations are the best indicator of climate fluctuations. The variation in length of both glaciers (Vadret da Roseg, Vadret da Tschierva) is monitored by the Swiss Glacier Monitoring Network. Both are showing a yearly retreat. (http://glaciology.ethz.ch/messnetz/index.html). The retreat of the glaciers is influencing a several range of the ecological factors of the site.

4.4.2 - Geomorphic setting

a) Mnimum elevation above sea level (in metres) 1994	
a) Maximum elevation above sea level (in metres)	
Entire river basin	
Upper part of river basin ☑	
Mddle part of river basin \Box	
Lower part of river basin \square	
More than one river basin \Box	
Not in river basin □	
Coastal	
Please name the river basin or basins. If the site lies in a sub-basin, please	also name the larger river basin. For a coastal/marine site, please name the sea or ocean.
Upper Inn basin.	
4.4.3 - Soil	

Mneral ☑	
(Update) Changes at RIS update No change Increase Decrease Unknown O	
No available information □	
Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ○ No ●	

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from rainfall		No change
Water inputs from surface water		No change

Water destination

Presence?		Changes at RIS update		
	To downstream catchment	No change		

Stability of water regime

Presence?	Changes at RIS update		
Water levels largely stable	No change		
Water levels fluctuating (including tidal)	No change		

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology.

The river Ova da Roseg is crossing the site. It has retained its natural dynamics. The peaks of high water levels are therefore mitigated. However, it remains a potential danger from the lake that has formed in front of the glacier Vadret da Roseg. In 1954, for example, it overflowed and flooded the Val Roseg.

The water regime is characterised by the melting of snow and ice. The glacier Ova da Roseg produces a lot of water from melting snow in

spring / early summer until the end of the thawing period at the beginning of autumn.

Additionally, periodic and non-periodic variations are present. Occasionally, heavy rainfalls produce peak flows. Daily fluctuations result from freezing-thawing cycles during the summer months. During the cold period the water level is reduced. The annual flow amplitude varies from approx. 0.2 m3 / s. in winter up to 10 m3 / s in summer.

4.4.5	- Sed	iment	rec	ıime

Sediment regime unknown □
<no available="" data=""></no>
4.4.6 - Water pH
Unknown ☑
4.4.7 - Water salinity
Fresh (<0.5 g/l)
(Update) Changes at RIS update No change
Unknown □
4.4.8 - Dissolved or suspended nutrients in water
Unknown ☑
4.4.9 - Features of the surrounding area which may affect the Site
Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the i) broadly similar O ii) significantly different o site itself:
Surrounding area has greater urbanisation or development \square

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services						
	Ecosystem service	Examples	Importance/Extent/Significance			
Fresh water		Drinking water for humans and/or livestock	High			
	Wetland non-food products	Timber	Low			

Surrounding area has higher human population density \square Surrounding area has more intensive agricultural use $\hfill\Box$

Surrounding area has significantly different land cover or habitat types \Box

Regulating Services

	Regulating Services		
Ecosystem service		Examples	Importance/Extent/Significance
	Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	Low
	Hazard reduction	Flood control, flood storage	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	Medium
Spiritual and inspirational	Aesthetic and sense of place values	High
Scientific and educational	Major scientific study site	Low
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium

Have studies or assessments been made of the economic valuation of vecosystem services provided by this Ramsar Site?

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland
ii) the site has exceptional cultural traditions or records of former $\hfill\Box$ civilizations that have influenced the ecological character of the wetland
iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples
iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

<no data available>

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
Local authority, municipality, (sub)district, etc.	\checkmark	2

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Cooperative/collective (e.g., farmers cooperative)	2	/

Provide further information on the land tenure / ownership regime (optional):

The site is owned by the Citizen's Community of Samedan

5.1.2 - Management authority

agency or organization responsible for managing the site:

Please list the local office / offices of any Cantonal office for Nature and Environment (Amt für Natur und Umwelt)

Provide the name and title of the person or people with responsibility for the wetland:

Andreas Cabalzar

Amt für Natur und Umwelt

Gürtelstrasse 89 Postal address: CH-7001 Chur, Switzerland Tel. +41 (0)81 257 29 46 www.anu.gr.ch

E-mail address: info@anu.gr.ch

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Livestock farming and ranching		Low impact	✓	No change	✓	No change

Human intrusions and disturbance

Factors adversel affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities		Medium impact	~	No change	✓	No change

Natural system modifications

Tatalar Ojotom modificationo						
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Dams and water			✓		✓	

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified			✓		✓	

Please describe any other threats (optional):

Glacier variations are the best indicator of climate fluctuations. The variation in lenght of both glaciers (Vadret da Roseg, Vadret da Tschierva) is monitored by the Swiss Glacier Monitoring Network. Both are showing a yearly retreat. (http://glaciology.ethz.ch/messnetz/index.html). The retreat of the glaciers is influencing a several range of the ecological factors of the site.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Federal Hunting Reserve (1991, SR 922.31)	Bernina-Albris (Object no. 17)	http://www.bafu.admin.ch/	partly
Federal Inventory of Alluvial Zones of National Importance (1992, RS 451.31)	Vadret da Roseg (Object no. 1235)	http://www.bafu.admin.ch/	whole
Federal Inventory of Landscape and Natural Monuments of National Importance (1977, RS 451.11)	Oberengadiner Seenlandschaft und Berninagruppe (Object no. 1908)	http://www.bafu.admin.ch/	partly

la Strict Nature Reserve	
lb Wilderness Area: protected area managed mainly for wilderness protection]
II National Park: protected area managed mainly for ecosystem protection and recreation]
III Natural Monument: protected area managed mainly for conservation of specific natural features	
IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention	7
V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation	
VI Managed Resource Protected Area: protected area managed mainly	ַ

for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

=-3			
Measures		Status	
	Legal protection	Implemented	

Species

Measures	Status
Threatened/rare species	Partially implemented
management programmes	r artially implemented

Human Activities

Measures	Status
Harvest controls/poaching enforcement	Implemented
Regulation/management of recreational activities	Partially implemented
Research	Implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes O No ●

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning Yes O No opposesses with another Contracting Party?

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant community	Proposed

The variation in lenght of both glaciers (Vadret da Roseg, Vadret da Tschierva) is monitored by the Swiss Glacier Monitoring Network.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Reference list (pdf): See 6.1.2. vi.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

ii. a detailed Ecological Character Description (ECD) (in a national format)

iii. a description of the site in a national or regional wetland inventory

<3 file(s) uploaded>

iv. relevant Article 3.2 reports

v. site management plan

<1 file(s) uploaded>

vi. other published literature

<2 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site



Alluvial zone including a Alluvial zone including a mountain lake and the Roseg glacier. (Federal Office for the Environment FOEN, A. Wipf, 10-09-2005)



Proglacial margin crossed by a brook. In the background, the Tschierva (left) and Roseg (right) glaciers. (Federal Office for the Environment FOEN, A Wipf, 10-09-2005)



Proglacial margin of Vadret da Roseg, crossed by a brook. In the background, the Roseg glacier and the Bernina massif. (Federal Office for the Environment FOEN, A. Wipf, 10-09-2005)



Brook crossing the proglacial margin. In the background, the Roseg glacier. (Federal Office for the Environment FOEN, A. Wipf, 10-09-



Meandering of a brook through the proglacial margins of Vadret da Tschierva and Vadret da Roseg, in the Roseg valley. (Federal Office for the Environment FOEN, A. Wipf, 10-09-2005)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2005-02-02