

# Ramsar Information Sheet

Published on 29 March 2017 Update version, previously published on 2 February 2005

# **Switzerland**Laubersmad-Salwidili



Designation date 2 February 2005 Site number 1444 Coordinates 46°47'54"N 07°59'26"E Area 1 376,00 ha

# 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

The site Laubersmad-Salwidili is located on the northern slope of the Brienzer Rothorn mountain range at an altitude between 1,060 and 1,900 meters asl. The mire landscape of a total of 1,376 ha is characterized by a mosaic of fens, several types of mountain swamps with low, transitional and raised bogs of national importance as well as wet spruce forests and meadows.

The site Laubersmad-Salwidili is outstanding for being a contiguous mire landscape with the most number of bogs under protection in Switzerland. Laubersmad-Salwidili is home to 24 plant and 33 animal species listed on the red lists of endangered species in Switzerland; 3 plant and 24 animal species are listed in the IUCN red list. The presence of the Three-toed Woodpecker, the Capercaillie, the Black Grouse and the Lynx underlines the important role of this site as a habitat for wild mammals and birds. In terms of ecosystem services, the site plays an important role for water retention. Since 2004 important activities for restoring bogs are implemented.

Human activities affecting the site include mountain pursuits such as skiing and hiking, agriculture (grazing) and leisure activities such as mushroom and berry picking.

# 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)

Laubersmad-Salwidili

#### 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 (optional)

The site consists of a slope extending from the Brienzer Rothorn-Tannhorn mountain range up to Place Salwidili. It is located above the mountain village of Sörenberg (population of 1860) and at approx. 50 km from Lucerne, capital of the canton of Lucerne (population of 60000).

#### 2.2.2 - General location

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

Region: Central Switzerland / District: Entlebuch / Commune: Fluehli

b) What is the nearest town or population centre?

Lucerne

#### 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  $\odot$ 

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): 1376

Area, in hectares (ha) as calculated from 1375.42 GIS boundaries

# 2.2.5 - Biogeography

# Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Freshwater Ecoregions of the World (FEOW)	Central & Western Europe
Other scheme (provide name below)	Northern Alps *

# 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

As a montane wetland, the site belongs to wetlands currently under-represented in the Ramsar List. (Résolution VIII.12: Renforcer l'utilisation rationnelle et la conservation des zones humides de montagne) In Switzerland, mires, fenlands, bogs are rare - and in most cases - protected habitats. Mire biotopes and mire landscapes are hotspots of biodiversity: Nearly 25% of endangered vascular plant species in Switzerland, among which many Red List species, occur in the mire biotopes of national importance, which cover only 0.5% of the country area.

Other reasons

The site includes a wide range of rare and representative types of mire habitats which differ in floristic terms and by origin, extending proportionately on a small area. Mosaics of mire complexes composed of fenlands, transitional mires, and bogs, surrounded by humid coniferous forests are characteristic for the site.

A vegetationmap is available from the WEB-GIS of the Federal office for the environment: https://map.geo.admin.ch/

#### ☑ 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
Anastrepta orcadensis	Orkney Notchwort	<b>2</b>					VU (National Red List Bryophytes 2004)	
Aulacomnium androgynum	Bud-headed Groove-moss	<b>2</b>					VU (National Red List Bryophytes 2004)	
Calypogeia sphagnicola	Bog Pouchwort	<b>2</b>					VU (National Red List Bryophytes 2004)	
Campyliadelphus elodes	Fine-leaved Marsh Feather- moss	✓					VU (National Red List Bryophytes 2004)	
Cyrtomnium hymenophylloides	Cyrtomnium Moss	<b>2</b>					EN (National Red List Bryophytes 2004)	
Dactylorhiza maculata	Moorland Spotted Orchid	Ø					CR (National Red List Ferns and Flowering Plants 2002)	
Dicranella cerviculata	Red-neck Forklet-moss	<b>2</b>					EN (National Red List Bryophytes 2004)	
Dicranum flagellare	Dicranum Moss	<b>/</b>					EN (National Red List Bryophytes 2004)	
Drosera anglica	Great Sundew	<b>2</b>					VU (National Red List Ferns and Flowering Plants 2002)	
Drosera obovata		Ø					W (National Red List Ferns and Flowering Plants 2002)	
Eryngium alpinum	Apine Sea Holly	<b>2</b>					VU (National Red List Ferns and Flowering Plants 2002)	

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red CITES Appendix I List	Other status	Justification
Galeopsis bifida	Split-lip Hemp-nettle	<b>&gt;</b>				VU (National Red List Ferns and Flowering Plants 2002)	
Gentiana cruciata	Cross Gentian	<b>2</b>				VU (National Red List Ferns and Flowering Plants 2002)	
Glyceria declinata	Small Sweet-grass	<b>2</b>				EN (National Red List Ferns and Flowering Plants 2002)	
Juncus stygius	Moor Rush	<b>2</b>				CR (National Red List Ferns and Flowering Plants 2002)	
Lycopodiella inundata	Marsh Club Moss	<b>2</b>			LC St	VU (National Red List Ferns and Flowering Plants 2002)	
Papaver occidentale		<b>V</b>				VU (National Red List Ferns and Flowering Plants 2002)	
Pedicularis sylvatica	Lousewort	<b>2</b>				VU (National Red List Ferns and Flowering Plants 2002)	
Riccardia chamedryfolia	Jagged Germanderwort	V				VU (National Red List Bryophytes 2004)	
Sagittaria sagittifolia	Arrowhead	<b>2</b>			LC St.	EN (National Red List Ferns and Flowering Plants 2002)	
Scheuchzeria palustris	Pod Grass	<b>&gt;</b>				VU (National Red List Ferns and Flowering Plants 2002)	
Utricularia minor	Lesser Bladderwort	<b>2</b>			LC Str	VU (National Red List Ferns and Flowering Plants 2002)	
Vaccinium oxycoccos	Small Cranberry	<b>2</b>				VU (National Red List Ferns and Flowering Plants 2002)	

The site harbours many species figuring on the national red list macrofungi 2007 and national red list lichens 2002. A list of these species is added to chapter 6.1.2.

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

0.0 Willing species whose presence relates to the international importance of the site											
Phylum	Scientific name	Common name	The second second	Critcrion	Size Period of pop. Est	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Birds											
CHORDATA/ AVES	Anthus pratensis	Meadow Pipit			2014		LC © ISS			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Aquila chrysaetos	Golden Eagle			2014		LC •#			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Bubo bubo	Eurasian Eagle- Owl			2014		LC Sign			EN (National Red List Breeding Birds 2010)	

Phylum	Scientific name	Common name	Speci qualif undo criter 2 4	fies contributes er under	Pop. Size	% occurrence 1) IUCN Red List		CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Circus aeruginosus	Western Marsh Harrier	<b>2</b> 0		2013	LC Str			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Crex crex	Corn Crake	<b>2</b> 0	00000	2004	LC			CR (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Gypaetus barbatus	Bearded Vulture	<b>2</b> 00		2001	LC • is • is			CR (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Lullula arborea	Woodlark	$\square$		2013	LC Str			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Merops apiaster	European Bee- eater			2011	LC • SEP			EN (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Numenius arquata	Eurasian Curlew			2014	NT • is • is			CR (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Pandion haliaetus	Osprey			2013	LC • Sign			RE (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Phylloscopus trochilus	Willow Warbler	<b>2</b> 0		2014	LC			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Saxicola rubetra	Whinchat	$\square$		2012	LC •\$* •\$#			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Scolopax rusticola	Eurasian Woodcock	$\square$		2014	LC •\$* • m			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Tetrao urogallus	Western Capercaillie	$\square$		2013	LC			EN (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Turdus pilaris	Fieldfare			2014	LC • is • is			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Turdus torquatus	Ring Ouzel			2014	LC •\$\$ •\$\$\$			VU (National Red List Breeding Birds 2010)	
CHORDATA/ AVES	Upupa epops	Eurasian Hoopoe			2012	LC • Sign			VU (National Red List Breeding Birds 2010)	
Others										
ARTHROPODA / INSECTA	Aeshna caerulea	Azure Hawker			2013	LC • ** • **			VU (National Red List Butterflies and Burnet Moths 2014)	
ARTHROPODA / INSECTA	Bembidion bruxellense		<b>2</b> 0		2013	LC			Vulnerable (National Red List Ground Beetles and Tiger Beetles 1994)	
ARTHROPODA / INSECTA	Boloria aquilonaris	Cranberry Fritillary	· 🗷 🗆 (		2012				EN (National Red List Butterflies and Burnet Moths 2014)	
ARTHROPODA / INSECTA	Brachyptera seticomis		<b>2</b> 0		2013				VU (Red List Mayflies, Stoneflies and Caddisflies 2012)	
CHORDATA/ AMPHIBIA	Bufo bufo	Common Toad	$\square$		2007	LC •\$\$ •\$\$			VU (National Red List Amphibians 2005)	
CHORDATA/ MAMMALIA	Canis Iupus	Wolf			2012	LC •\$* •\$#	V		Extinct (National Red List Mammals 1994)	
ARTHROPODA / INSECTA	Hydropsyche saxonica				2009				VU (Red List Mayflies, Stoneflies and Caddisflies 2012)	

Phylum	Scientific name	Common name	qua ui cri	ecies alifies nder terior	s (	Species contributes under criterion	Pop. Size	Period of pop. Es	% occurrence 1)	IUCN e Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
ARTHROPODA / INSECTA	Lepturobosca virens		<b>V</b>				)	2011					Vulnerable (National Red List Ground Beetles and Tiger Beetles 1994)	
CHORDATA/ MAMMALIA	Lynx lynx	Eurasian Lynx	<b>V</b>				]	2013		LC Sign			Endangered (National Red List Mammals 1994)	
CHORDATA/ MAMMALIA		Least Weasel	<b>V</b>				]	2004		LC			Vulnerable (National Red List Mammals 1994)	
MAMMALIA		European Polecat	<b>V</b>				]	2002		LC Sign			Vulnerable (National Red List Mammals 1994)	
ARTHROPODA / INSECTA		Camberwell Beauty	<b>V</b>			1000	)	2009					VU (National Red List Butterflies and Burnet Moths 2014)	
ARTHROPODA / INSECTA	Rhyacophila praemorsa		<b>V</b>				)	2005					VU (Red List Mayflies, Stoneflies and Caddisflies 2012)	
INSECTA	grossum	Large Marsh Grasshopper	<b>2</b> C				)	2001					VU (National Red List Orthoptera 2007)	
ARTHROPODA / INSECTA	Trechus rubens		<b>V</b>				)	2012					Vulnerable (National Red List Ground Beetles and Tiger Beetles 1994)	

<sup>1)</sup> Percentage of the total biogeographic population at the site

0 ( ) ( ) ( ) ( ) ( )	
Supports rare/endangered amphibian species	
Capporte rare/oridarigorea ampribiam operior	

# 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
Transitional reeds	<b>2</b>	Rhynchosporion albae with Rhynchosporetum albae; Caricetum limosae; Caricion lasiocarpae	community includes rare / threatened / endangered species
Sphagnum bogs	<b>2</b>	Sphagnion magellanici with Pinus mugo- Sphagnetum	community includes rare / threatened / endangered species
Raised bogs	Ø	Sphagnion magellanici with Pinus mugo- Sphagnetum	community includes rare / threatened / endangered species
Sedge reeds	Ø	Caricion fuscae with Caricetum fuscae; Eriophoro-Trichophoretum caespitosi	community includes rare / threatened / endangered species

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

# 4.1 - Ecological character

In Switzerland, mires, fenlands, bogs are rare - and in most cases - protected habitats. Mire biotopes and mire landscapes are hotspots of biodiversity: Nearly 25% of endangered vascular plant species in Switzerland, among which many Red List species, occur in the mire biotopes of national importance, which cover only 0.5% of the country area. The site includes a wide range of different types of mire habitats which differ in floristic terms and by origin, extending proportionately on a small area. Mosaics of mire complexes composed of fenlands, transitional mires, and bogs, surrounded by humid coniferous forests are characteristic for the site. Therefore, the site bares high species richness - especially of wetland / mire depending plant species of which a relatively high number is threatened at a national level.

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

#### Inland wetlands

ilialia welalias			,	
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 >> Mt Permanent rivers/ streams/ creeks		4		
Fresh water > Flowing water >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks		4		
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		1		
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		3		
Fresh water > Marshes on peat soils >> U: Permanent Non- forested peatlands		3		Rare
Fresh water > Marshes on inorganic or peat soils >> Va: Montane wetlands		1		Rare
Fresh water > Marshes on inorganic soils >> W: Shrub- dominated wetlands		2		
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		2		Rare
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		2		Rare
Fresh, saline, brackish or alkaline water > Subterranean >> Zk(b): Karst and other subterranean hydrological systems		4		Rare

(ECD) Habitat connectivity

The area is classified as a wildlife corridor of national importance (Axe de liaison national. Système de mise en réseau faune sauvage; Federal Office for the Environment FOEN)

# 4.3 - Biological components

# 4.3.1 - Plant species

Invasive alien plant species

irvasivo alion piant sposios			
Scientific name	Common name	Impacts	Changes at RIS update
Buddleja davidii	Butterfly Bush	Actually (major impacts)	unknown

#### 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	Alauda arvensis	Eurasian Skylark		2012		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Alectoris graeca	Rock Partridge		2010		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	Asio otus	Long-eared Owl		2014		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Carduelis cannabina	Common Linnet		2014		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Cuculus canorus	Common Cuckoo		2014		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Delichon urbicum	Common House Martin		2014		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Dendrocopos medius	Mddle Spotted Woodpecker		2012		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Emberiza cirlus	Cirl Bunting		2003		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Falco peregrinus	Peregrine Falcon		2012		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Falco subbuteo	Eurasian Hobby		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	Jynx torquilla	Eurasian Wryneck		2011		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		2014		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Mlvus milvus	Red Kite		2014		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Motacilla flava	Western Yellow Wagtail		2010		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Pernis apivorus	European Honey Buzzard		2014		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Phoenicurus phoenicurus	Common Redstart		2014		High Priority Species (List of National Priority Species 2011)
CHORDATA/AVES	Sylvia borin	Garden Warbler		2014		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	Dfb: Humid continental (Humid with severe winter, no dry season, warm
	summer)

4.4.2 - Geomorphic set	ting		
a) Minimum elevation ab	1060		
a) Maximum elevation ab	metres)		
a, naman didiadin az	metres) 1908		
	Er	tire river basin	
	Upper pa	t of river basin 🗹	
	Middle pa	t of river basin $\square$	
	Lower pa	t of river basin $\square$	
	More than	one river basin $\square$	
	No	t in river basin	
		Coastal	
	or basins. If the site lies in a	sub-basin, please also name	e the larger river basin. For a coastal/marine site, please name the sea or ocean.
Upper Rhine basin.			
4.4.3 - Soil			
		Organic 🗹	
	(Update) Changes	at RIS update No change ©	Increase O Decrease O Unknown O
		ole information	
Are soil types subject to	change as a result of changir ons (e.g., increased salinity or	ng hydrological	
Please provide further inform		acidilication)?	
		gley, variegated clays a	nd other gleys, anmoor and peat soils.
4.4.4 - Water regime			
Water permanence Presence?	Changes at RIS update		
Usually permanent water present			
present			
Source of water that maintain:  Presence?	s character of the site  Predominant water source	Changes at DIS undate	
Water inputs from rainfall	Predominant water source	Changes at RIS update  No change	
		-	
Water destination  Presence?	Changes at RIS update		
Feeds groundwater	No change		
Stability of water regime			
Presence?	Changes at RIS update		
Water levels largely stable	No change		
4.4.5 - Sediment regime		_	
	Sediment re	gime unknown 🗆	
<no available="" data=""></no>			
4.4.6 - Water pH			
		Acid (pH<5.5) ☑	
	(Update) Changes	at RIS update No change @	Increase O Decrease O Unknown O
	•	Unknown □	
4.4.7 - Water salinity			
	F	Fresh (<0.5 g/l) 🗹	
	(Update) Changes	at RIS update No change	Increase O Decrease O Unknown O
		Unknown	
4.4.8 - Dissolved or sus	spended nutrients in wat	er	
		Unknown 🗹	
440 5	alies es e	many offer the Co	
4.4.9 - Features of the s			
	and if so how, the landscape surrounding the Ramsar Site		ilar <sup>O</sup> ii) significantly different <b>⊚</b>

Surrounding area has greater urbanisation or development $\Box$
Surrounding area has higher human population density $\Box$
Surrounding area has more intensive agricultural use $\Box$
Surrounding area has significantly different land cover or habitat types $\ \square$

Please describe other ways in which the surrounding area is different:

Mire habitats in general are of a rare habitat type in Switzerland (mire biotopes of national importance cover 0.5% of the country area), significantly differing from the surroundings.

The surrounding area of the site covers sparsely, or unpopulated and uncultivated alpine areas (Brienzer Rothom), as well as more densely populated valleys with more intensive agricultural use and greater development.

# 4.5 - Ecosystem services

# 4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Wetland non-food products	Livestock fodder	Medium
Wetland non-food products	Timber	Low

Regulating Services

1 togulating out vioco			
Ecosystem service	Examples	Importance/Extent/Significance	
Maintenance of hydrological regimes	Groundwater recharge and discharge	High	
Hazard reduction	Flood control, flood storage	Medium	

#### Cultural Services

Cultural Services					
Ecosystem service	Examples	Importance/Extent/Significance			
Recreation and tourism	Picnics, outings, touring	High			
Recreation and tourism	Recreational hunting and fishing	Low			
Recreation and tourism	Nature observation and nature-based tourism	High			
Spiritual and inspirational	Aesthetic and sense of place values	High			
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium			
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium			
Scientific and educational	Educational activities and opportunities	Low			
Scientific and educational	Major scientific study site	Low			
Scientific and educational	Type location for a taxon	Medium			

#### Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Nutrient cycling	Carbon storage/sequestration	Medium

Have studies or assessments been made of the economic valuation of ecosystem 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 $\hfill\Box$ 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

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Cooperative/collective (e.g., farmers cooperative)	<b>✓</b>	✓
Foundation/non- governmental organization/trust	<b>V</b>	<b>2</b>
Other types of private/individual owner(s)	<b>/</b>	<b>/</b>

#### 5.1.2 - Management authority

agency or organization responsible for

Please list the local office / offices of any Canton of Lucerne (Bau-, Umwelt- und Wirtschaftsdepartement - Umwelt und Energie UWE)

managing the site: UNESCO Biosphäre Entlebuch administration

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

Peter Kull

Kanton Luzern

Bau-, Umwelt- und Wirtschaftsdepartement

Landwirtschaft und Wald (lawa)

Centralstrasse 33

Postfach

6210 Sursee Postal address:

UNESCO Biosphäre Entlebuch

Chlosterbüel 28 CH-6170 Schüpfheim Tel. +41 (0)41 485 88 50 zentrum@biosphaere

E-mail address: uwe@lu.ch

# 5.2 - Ecological character threats and responses (Management)

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

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage			<b>✓</b>		✓	

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Livestock farming and ranching			<b>/</b>		<b>/</b>	

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified			✓		<b></b>	

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities			✓		<b>2</b>	
Unspecified/others	Medium impact	Medium impact	✓	No change	✓	No change

Natural system modifications

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

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species			<b>/</b>		<b>/</b>	

#### Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Agricultural and forestry effluents	Medium impact	Medium impact	<b>/</b>	No change	✓	No change

# Please describe any other threats (optional):

Formation of shrubs / woodland in poorly accessible areas.

Inadequate livestock grazing.

Illegal use of access roads and of buildings constructed for alpine farming.

# 5.2.2 - Legal conservation status

#### Global legal designations

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Designation type	Name of area	Online information url	Overlap with Ramsar Site
UNESCO Biosphere Reserve	Entlebuch (Object no. 2.0)	http://www.biosphaere.ch/	partly

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Cantonal Forest Reserve	Laubersmadghack (Object no.160_LU_17)	http://www.bafu.admin.ch/	whole
Federal Hunting Reserve (1991, SR 922.31)	Tannhorn (Object no. 5)	http://www.bafu.admin.ch/	partly
Federal Inventory of Mre Landscapes of Particular Beauty and National Importance (1996, SR 451.35)	Habkern/Sörenberg (Object no. 13)	http://www.bafu.admin.ch/	partly
Federal Inventory of Raised Bogs and Transitional Mres of National Importance (1991, SR 451.32)	Salwidili (Object no. 313)/ Zopf / Salwiden (Object no. 314) / Laubersmadghack (Object no. 315) / Tuernliwald (Object no. 316) / Gross Gfael (Object no. 317) / Husegg- Hurnischwand (Object no. 318) / Zopf (Object no. 362)	http://www.bafu.admin.ch/	whole
Federal inventory of Fenlands of National Importance (1994, RS 451.33)	Salwiden (Object no. 3285) / Schwarzenegg / Steinetli (Object no. 3296) / Laubersmadghack / Baersel (Object no. 3297) / Arnibergli (Object no. 3357) / Schöniseischwand / Spierweid (Object no. 3359) / Schönisei / Harzisboden (Object no. 3360)	http://www.bafu.admin.ch/	whole

Non-statutory designations

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Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other non-statutory designation	Emerald site no. CH0000012 Flühli- Sörenberg-Habkern / Biogenetic reserve Laubersmadghack (Object no.9)	http://www.bafu.admin.ch/	partly

# 5.2.3 - IUCN protected areas categories (2008)

la Strict Nature Reserve
Ib 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
VProtected Landscape/Seascape: protected area managed mainly for

 $\mbox{\it M}$  Managed Resource Protected Area: protected area managed mainly  $\hfill\Box$ for the sustainable use of natural ecosystems

#### 5.2.4 - Key conservation measures

Legal protection

Measures	Status	
Legal protection	Implemented	

#### Habitat

Measures	Status
Habitat manipulation/enhancement	Partially implemented

#### **Human Activities**

Measures	Status
Communication, education, and participation and awareness activities	Partially implemented
Regulation/management of recreational activities	Partially implemented
Harvest controls/poaching enforcement	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 Yes O No 

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 O processes with another Contracting Party?

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

The site is part of the UNESCO Biosphäre Entlebuch. Communication, education, and participation and awareness activities, as well as educational and visitor programmes are organised in this context.

Research and scientific studies are also carried out under the Unesco biosphere administration.

URL of site-related webpage (if relevant): http://www.biosphaere.ch/

# 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Yes, there is a plan

# 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant community	Proposed

Monitored as part of the national programme: "Monitoring of the condition and development of mire biotopes and mire landscapes" (FOEN, 2010)

Monitoring of lichens and fungi proposed.

Several locations of the site are monitored as part the "Swiss Biodiverisity Monitoring BDM" programme (FOEN).

The effect of the regeneration / restoration of the mire biotopes, performed in 2004, is monitored.

# 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

<5 file(s) uploaded>

iv. relevant Article 3.2 reports

<no file available>

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:



Laubersmad-Salwidili: View towards the "Schrattenfluh" (
Philipp Armein, Fachleiter
Jagd und Fischerei Kanton
Luzem, 08-09-2006 )



Laubersmad-Salwidili ( Philipp Amein, Fachleiter Jagd und Fischerei Kanton Luzem, 13-08-2015 )



Laubersmad-Salwidili ( Philipp Amrein, Fachleiter Jagd und Fischerei Kanton Luzem, 13-08-2015 )

# 6.1.4 - Designation letter and related data

#### Designation letter

<1 file(s) uploaded>

Date of Designation 2005-02-02