Ramsar Information Sheet

Published on 4 September 2019

Montenegro

Ulcinj Salina

Designation date	1 July 2019
Site number	2399
Coordinates	41°55'20"N 19°18'01"E
Area	1 477,00 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

Ulcinj Salina is situated on the southeastern coast of Adriatic Sea, which also represents the utmost southeast point of Montenegro. The salina is the largest of its kind in the Adriatic Sea (Criterion 1) and is located on the territory of Municipality of Ulcinj, near to the state border with Albania. It is, in wider sense, ecologically and geographically a part of the much larger (ca. 1.000 km2) Bojana Delta and Skadar Lake (Ramsar Site since 1995) wetland complex. The Site is located only 1km away from Ulcinj town, and the same distance from the border with Albania.
Ulcinj Salina is situated at the site of a former lagoon and wetland placed in the delta of river Bojana, Zogajsko blato (Zogaj or Bird marsh). This lagoon is separated from the sea by Velika Plaža ("large beach"), and from river Bojana by the natural river bank, in some places additionally consolidated by the artificial embankment against floods. The area is flooded by fine river deposits of organic origin and sand as inorganic component. As a result of the influence of the sea and existing salt production, the soil has become alkaline. The Salina was built into a system of salt-pans in the 1930s. The salt production in Ulcinj Salina went on for about 80 years, between 1934 and 2013, when the salt production company went bankrupt and the salt production stopped (Rubinić et al. 2019).
20 bird species found here are on IUCN Global Red List (Criterion 2). Rich halophyte communities are important, because there is only one more habitat like this in Montenegro - Tivat Salina (Ramsar Site since 2013). Ulcinj Salina is the most important wintering, nesting and feeding site for birds on the eastern coast of the Adriatic sea and a key stopover site for bird migration on the Adriatic Flyway. Millions of birds fly over this area on their way from Europe to Africa and back. Between 5 and 32 thousand birds have been registered there in period from November until the end of March. During the breeding period, about 5000 birds are present on Salina (Criteria 3 to 5).
During some autumn and winter periods (from September - December) up to 1.6% of the global population of endangered Dalmatian Pelican (Pelecanus crispus) use the salina as feeding and resting site. For at least 7 bird species the populations exceed the threshold of 1% of regional or global population (Criterion 6).
The Ulcinj Salina is thus a well justified international Important Wetland site meeting the Ramsar Criteria 1-6.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

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

From year	1999
To year	2019

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Ulcinj Salina
Unofficial name (optional)	Ulcinjska Solana, Kriporia Ulqin

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 Ramsar Site boundaries correspond to those of the Nature Park Ulcinj Salina. They border has a length of 18.68 km around the site. It follows 16.55 km the drainage channel - the channel is included in the border - and 2.13 km of the northern coast of the Port Milena channel near the administrative and factory buildings of the saltworks (Solana). The border follows the artificially built structures around the site and includes the entire Solana and surrounding channels, but excludes Port Milena and the remains of the previous lagoon.
The Ulcinj Salina has been already recognized at the international level for its biodiversity value. Ulcin Solana is designated as IBA ‚Ulcinj saltpans', code YU040. The site delineation is the same as borders of the Ulcinj Solana. The site was designated for it importance for breeding and feeding waders, several of which are species of European conservation concern. Ulcinj Salina also represents a potential area of the Natura 2000 network on the basis of recorded birds species listed in Annex I of the Birds Directive. The proposed boundaries of potential Natura 2000 sites from 2019 are within the same borders already recognized IBA “Ulcinj Saltpans” from 1989 , code YU040.

2.2.2 - General location

a) In which large administrative region does the site lie?	Municipality of Ulcinj
b) What is the nearest town or population centre?	Ulcinj

2.2.3 - For wetlands on national boundaries only

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

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha): 1477

Area, in hectares (ha) as calculated from GIS boundaries: 1474.464

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Mediterranean biogeographic region
Other scheme (provide name below)	Illyrian deciduous forest region

Other biogeographic regionalisation scheme

After delineation in European ecological region (DMEER), it belongs to the Illyrian deciduous forest region.

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

Hydrological services provided	The ecological character of the Ulcinj salina is defined by the maintenance and control of the water regimes. In this area, hydrological conditions are not determined fully by a natural hydrological cycle, but are managed by man, following traditional patterns related to sustainable salt production and harvesting. To retain this character, maintenance of the water regimes is essential also in the future. Due to the hydrological regime the site is highly productive and provides food for very large numbers of waterbirds, many them of them threatened. In addition up to 35.000 tons of table salt can be produced. The salina also plays an important role for the seasonal water retention in the area (Sovinc et al. 2017).
Other ecosystem services provided	The site has a good potential for environmental education and does already contribute to a sustainable development of tourism in the Ulcinj municipality. Different forms of tourism are possible e.g. bird-watching, hiking, cycling, etc.. The site has also good potential for health tourism (mud and salt water treatments). It can also provide some potential for some sustainable grazing.
Other reasons	Ulcinj Salina is, with 1477 ha, the largest complex of lagoon systems for salt production in the Adriatic Sea region. The salt production was stopped in 2013. Due to a combination of hypersaline and brackish environment, they are inhabited by unique species, forming a special type of ecosystem. It is a rare example of a wetland which has been created and maintained by humans and nature. For both the Mediterranean and Illyrian deciduous forest regions the size of the salina with its wetland habitats is exceptional and unique. It is an exquisite example of a salina on the eastern Adriatic coast (stretching over 800 km). There are only about 170 salinas in the Mediterranean region overall, of which about half are still operating. About three quarters are located in Spain, Greece, Italy, France and Portugal (Walmsley 1999). Benefits of the Ulcinj salina are created not only by the site, but also by its interaction with its surroundings and vice-versa, the broader area including the salina has got more potential for its future coordinated use. This covers besides the salina, the Velika Plaža, Šasko Jezero and Bojana river delta. This sites also meet both Ramsar Criteria and are proposed as candidate sites for the Natura 2000 and Emerald Network (Rubinić et al. 2019).

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification

Beside birds with some 252 species which are the best-known animal group of Solana Ulcinj, a high biodiversity of mixed alkaline-freshwater environment for Montenegro and Balkan region is evident. For example, the Mediterranean banded killifish has a stronghold in Solana Ulcinj and along the eastern Adriatic coast. Species as European Pond Turtle, European Otter and Shakal are present, too. General survey of the species richness trough animal groups in the Bojana-Buna Delta allow a conclusion that the Solana Ulcinj has an outstanding position at the national and even international levels and that supports an important proportion of biodiversity from the qualitative aspect (see table below).

_____

Group number of species

_____

Fish 141

Amphibians 12

Reptiles 28

Birds 252

Mammals 33

_____

(updated based on Štumberger et al. 2006)

Ulcinj salina belongs to the biome of Mediterranean forest and shrub (makija), dominated with evergreen oak (Quercus ilex; Stevanović, Vasić, 1995). The biome is elongated along much of the east Adriatic coast, continuing across a large part of the Aegean coast (Matvejev 1995). The landscape impression of the salina and the surrounding lowland is totally different. Due to geomorphology, pedological and hydrological conditions, as well as the heavy influence of humans, alluvial forests, marshes, meadows and pastures predominate. Flora and fauna is typically Mediterranean, with cosmopolitan species being present too (Caković, Milošević 2013). With its tradition of wetland, the salina and its surroundings provide a home to many species which cannot be found elsewhere in Montenegro. Of all organisms, birds are the best known, followed by mammals, reptiles and amphibians. Much less information is available on fish and plants, while for invertebrates there is almost no information.

☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

☑ Criterion 5 : >20,000 waterbirds

Overall waterbird numbers	32.000
Start year	1999
Source of data:	CZIP database, IWC database, Sovinc et al. 2017, Sackl et al. in press, Rubinić et al. 2019

☑ Criterion 6 : >1% waterbird population

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
Juncus maritimus	Sea Rush	☑	☐	☐		☐	EU habitat directive	Most common character plant for EU protected habitat "Mediterranean salt meadows (Juncetalia maritimi)"
Limonium narbonense	Common Sea Lavender	☑	☐	☐		☐	EU habitat directive Annex I	Most common character plant for EU protected habitat "Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)"
Polypogon monspeliensis	Annual Beard-grass	☐	☑	☐	LC	☐	EU habitat directive	Character plant for EU protected habitat "Salicornia and other annuals colonizing mud and sand"
Salicornia europaea	Common Glasswort (solnjača)	☐	☑	☐		☐	EU habitat directive	Most common character plant for EU protected habitat "Salicornia and other annuals colonizing mud and sand"
Salsola soda	Opposite-leaved Saltwort (slanica)	☐	☑	☐		☐	EU habitat directive	Character plant for EU protected habitat "Salicornia and other annuals colonizing mud and sand"
Spergularia marina	Salt Sandspurry	☑	☐	☐	LC	☐	EU habitat directive	Character plant for EU protected habitat "Salicornia and other annuals colonizing mud and sand"

Source Sovinc et al. 2017

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

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA / AVES	*Alcedo atthis*	Common Kingfisher	☑	☐	☐	☐	☐	☐	☐	☐	71			LC	☐	☐	VU (European Red List)	
CHORDATA / AVES	*Anas clypeata*	Northern Shoveler	☐	☑	☐	☐	☑	☐	☐	☐	1158				☐	☐	LC (European Red List)	site important during migration found in adjacent Bojana river delta with 11.033 specimen or 2.5% (Sackl et al. 2017). NE/SE
CHORDATA / AVES	*Anas penelope*	Eurasian Wigeon	☐	☑	☐	☐	☑	☐	☐	☐	2549		0.58		☐	☐	LC (European Red List)	site important during migration found in adjacent Bojana river delta with 4.330 specimen or 1,4% (Sackl et al. 2017) NE/SE
CHORDATA / AVES	*Anas querquedula*	Garganey	☐	☑	☐	☐	☑	☐	☐	☐	8279		0.62		☐	☐	LC (European Red List)	site important during migration found in adjacent Bojana river delta with 63.533 specimen or 3.2% (Sackl et al. 2017)
CHORDATA / AVES	*Anser erythropus*	Lesser White-fronted Goose	☑	☐	☐	☐	☐	☐	☐	☐	3			VU	☐	☑	EN (European Red List)	
CHORDATA / AVES	*Aquila clanga*	Greater Spotted Eagle	☑	☐	☐	☐	☐	☐	☐	☐	2				☐	☑	EN (European Red List)	VU after IUCN, mistake in online RIS

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Ardea alba*	Great Egret	☐	☑	☐	☐	☑	☐	☐	☐	501		0.64	LC	☐	☐	LC (European Red List)	site important during migration
CHORDATA / AVES	*Aythya ferina*	Common Pochard	☑	☑	☐	☐	☐	☐	☐	☐	1248			VU	☐	☐	VU (European Red List)	site important during migration Stumberger et al. 2008, Euronatur/CZIP Database unpubl.
CHORDATA / AVES	*Aythya nyroca*	Ferruginous Duck	☑	☐	☐	☐	☑	☐	☐	☐	47			NT	☐	☑	LC (European Red List)	site important during migration found in adjacent Bojana river delta with 1913 specimen or 3.8% (Sackl et al. 2017) NE/SE
CHORDATA / AVES	*Branta ruficollis*	Red-breasted Goose	☑	☐	☐	☐	☐	☐	☐	☐	5			VU	☐	☑		P. Sackl, M. Tiefenbach, unpubl
CHORDATA / AVES	*Burhinus oedicnemus*	Eurasian Stone-curlew	☐	☑	☐	☐	☑	☐	☐	☐	120		0.57	LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	site important during migration and breeding Stumberger et al. 2008, Euronatur/CZIP Database unpubl.
CHORDATA / AVES	*Calidris alpina*	Dunlin	☐	☑	☐	☐	☑	☐	☐	☐	10503		0.79	LC	☐	☐	LC (European Red List)	site important during migration NE/SE
CHORDATA / AVES	*Calidris canutus*	Red Knot	☐	☑	☐	☐	☐	☐	☐	☐	149			NT	☐	☐	NT (European Red List)	site important during migration
CHORDATA / AVES	*Calidris ferruginea*	Curlew Sandpiper	☑	☑	☐	☐	☐	☐	☐	☐	2328			NT	☐	☐	VU (European Red List)	site important during migration
CHORDATA / AVES	*Charadrius alexandrinus*	Snowy Plover; Kentish Plover	☐	☑	☐	☐	☑	☐	☐	☐	472		0.86	LC	☐	☐	LC (European Red List)	site important during migration and breeding
CHORDATA / AVES	*Circus aeruginosus*	Western Marsh Harrier	☐	☐	☐	☐	☑	☐	☐	☐	30			LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	Stumberger et al. 2008, Euronatur/CZIP Database unpubl.
CHORDATA / AVES	*Coracias garrulus*	European Roller	☑	☐	☐	☐	☑	☐	☐	☐	18			LC	☐	☑	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	Stumberger et al. 2008, Euronatur/CZIP Database unpubl.
CHORDATA / AVES	*Egretta garzetta*	Little Egret	☐	☑	☐	☐	☑	☐	☐	☐	680		0.93	LC	☐	☐	LC (European Red List)	site important during migration
CHORDATA / AVES	*Falco biarmicus*	Lanner Falcon	☑	☐	☐	☐	☐	☐	☐	☐	1			LC	☐	☐	EN (European Red List)	Stumberger et al. 2008, Euronatur/CZIP Database unpubl.
CHORDATA / AVES	*Falco vespertinus*	Red-footed Falcon	☑	☐	☐	☐	☐	☐	☐	☐	11			NT	☐	☑	NT (European Red List)	
CHORDATA / AVES	*Fulica atra*	Eurasian Coot	☐	☑	☐	☐	☑	☐	☐	☐	7640			LC	☐	☐	NT (European Red List)	site important during migration and breeding
CHORDATA / AVES	*Gallinago media*	Great Snipe	☐	☐	☐	☐	☑	☐	☐	☐	1			NT	☐	☐		P. Sackl, M. Soskic, B. Zekovic, unpubl.
CHORDATA / AVES	*Glareola pratincola*	Collared Pratincole	☐	☑	☑	☐	☑	☐	☐	☐	230		1	LC	☐	☐	LC (European Red List)	site important during migration and breeding Rubinič et al. 2019 NE/SE
CHORDATA / AVES	*Grus grus*	Common Crane	☑	☑	☐	☐	☑	☐	☐	☐	632		0.65	LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	site important during migration
CHORDATA / AVES	*Haematopus ostralegus*	Eurasian Oystercatcher	☑	☐	☐	☐	☐	☐	☐	☐	24			NT	☐	☐	VU (European Red List)	

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Himantopus himantopus*	Black-winged Stilt	☐	☑	☑	☐	☑	☐	☐	☐	645		1.74	LC	☐	☐	LC (European Red List)	site important during migration NE/SE
CHORDATA / AVES	*Limosa limosa*	Black-tailed Godwit	☑	☑	☑	☐	☑	☐	☐	☐	3423		3.57	NT	☐	☐	VU (European Red List)	site important during migration NE/SE
CHORDATA / AVES	*Microcarbo pygmeus*	Pygmy Cormorant	☑	☑	☐	☐	☑	☐	☐	☐	639		0.68		☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	site important during migration and feeding
CHORDATA / AVES	*Numenius arquata*	Eurasian Curlew	☑	☑	☐	☐	☐	☐	☐	☐	190			NT	☐	☐	VU (European Red List)	site important during migration Stumberger et al. 2008, Euronatur/CZIP Database unpubl.
CHORDATA / AVES	*Numenius tenuirostris*	Slender-billed Curlew	☑	☑	☐	☐	☐	☐	☐	☐	1			CR	☑	☑	CR (PE) (European Red List)	site important during migration
CHORDATA / AVES	*Nycticorax nycticorax*	Black-crowned Night-Heron; Black-crowned Night Heron	☑	☐	☐	☐	☑	☐	☐	☐	111			LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	
CHORDATA / AVES	*Pelecanus crispus*	Dalmatian Pelican	☑	☑	☑	☐	☑	☐	☐	☐	147		1.63	NT	☑	☑	VU (European Red List)	site important during migration and feeding Stumberger et al. 2008, Euronatur/CZIP Database unpubl. NE/SE
CHORDATA / AVES	*Philomachus pugnax*	Ruff	☐	☑	☐	☐	☑	☐	☐	☐	2618				☐	☐	LC (European Red List)	site important during migration
CHORDATA / AVES	*Phoenicopterus roseus*	Greater Flamingo	☐	☑	☐	☐	☑	☐	☐	☐	1164		0.73	LC	☐	☐	LC (European Red List)	site important during migration, nesting and feeding
CHORDATA / AVES	*Platalea leucorodia*	Eurasian Spoonbill	☐	☑	☑	☐	☑	☐	☐	☐	237		1.39	LC	☐	☐	LC (European Red List)	site important during migration Rubinič et al. 2019 NE/SE
CHORDATA / AVES	*Plegadis falcinellus*	Glossy Ibis	☑	☑	☐	☐	☑	☐	☐	☐	181			LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	site important during migration Rubinič et al. 2019
CHORDATA / AVES	*Pluvialis apricaria*	European Golden-Plover; European Golden Plover	☑	☑	☐	☐	☑	☐	☐	☐	630			LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	site important during migration
CHORDATA / AVES	*Pluvialis squatarola*	Black-bellied Plover	☐	☑	☐	☐	☑	☐	☐	☐	481		0.5	LC	☐	☐	LC (European Red List)	site important during migration NE/SE
CHORDATA / AVES	*Podiceps auritus*	Horned Grebe	☑	☐	☐	☐	☐	☐	☐	☐	2			VU	☐	☐	VU (European Red List)	
CHORDATA / AVES	*Recurvirostra avosetta*	Pied Avocet	☑	☑	☐	☐	☑	☐	☐	☐	101			LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	site important during migration and feeding Rubinič et al. 2019
CHORDATA / AVES	*Sterna hirundo*	Common Tern	☑	☐	☐	☐	☑	☐	☐	☐	144			LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	Stumberger et al. 2008, Euronatur/CZIP Database unpubl.
CHORDATA / AVES	*Sternula albifrons*	Little Tern	☑	☑	☐	☐	☑	☐	☐	☐	393			LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	site important during migration and feeding Stumberger et al. 2008, Euronatur/CZIP Database unpubl.
CHORDATA / AVES	*Streptopelia turtur*	European Turtle-Dove; European Turtle Dove	☑	☐	☐	☐	☐	☐	☐	☐	9			VU	☐	☐	VU (European Red List)	Stumberger et al. 2008, Euronatur/CZIP Database unpubl.

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Tringa erythropus*	Spotted Redshank	☐	☑	☑	☐	☑	☐	☐	☐	2249		2.25	LC	☐	☐	LC (European Red List)	site important during migration NE/SE
CHORDATA / AVES	*Tringa glareola*	Wood Sandpiper	☑	☑	☐	☐	☑	☐	☐	☐	750			LC	☐	☐	LC (European Red List) Annex 1 species under the EU Wild Birds Directive	site important during migration Stumberger et al. 2008, Euronatur/CZIP Database unpubl.
CHORDATA / AVES	*Tringa stagnatilis*	Marsh Sandpiper	☐	☑	☑	☐	☑	☐	☐	☐	500		2.08	LC	☐	☐	LC (European Red List)	site important during migration NE/SE
CHORDATA / AVES	*Vanellus vanellus*	Northern Lapwing	☑	☑	☐	☐	☑	☐	☐	☐	4143			NT	☐	☐	VU (European Red List)	site important during migration and breeding
Others																		
CHORDATA / MAMMALIA	*Lutra lutra*	European Otter	☑	☐	☐	☐	☐	☐	☐	☐				NT	☑	☐		
CHORDATA / AMPHIBIA	*Pelophylax shqipericus*	Albanian Water Frog	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐		

1) Percentage of the total biogeographic population at the site

Emys obicularis (European Pond turtle, NT) is also present at the site.
1) % of the European Population according to WPE5 (Water bird population estimates 2019),
The population estimates are given for the maximum observation during one day from the time between 25.04.2003 and 28.06.2018. Over 50 observations were taken into account.
Most data are relating the EU Salina Study by Sovinc et al. 2017, which did compile and analyse the most complete data set and did use the following sources:
Data obtained by CZIP (original data file), from Studia zaštite (2015), and from EuroNatur publications (Štumberger et al. 2007, Schwarz & Sackl 2017), data collected during IWC (prepared by IWC national coordinator A. Vizi) as well as our own data of the EU Salina study collected in 2017 surveys.
In addition Stumberger et al. 2008, Euronatur/CZIP Database unpubl. (updated Version compared to Sovinc et al. 2017), Rubinič et al. 2019 and some unpublished data from Sackl et al. have been used for selected species and are noted in the justification field. If not specifically mentioned the data was taken from Sovinc et al. 2017).
Also the status on the European Red List for Birds (BirdLife International, 2015) and if relevant the status under the EU Wild Birds Directive is given.

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
Mediterranean salt meadows (Juncetalia maritimi)	☑	Various mediterranean communities of the Juncetalia maritimi.	EU Habitats Directive, Annex I habitat type (code 1410), in unfavorable state in the Mediterranean
Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	☑	Perennial vegetation of marine saline muds (schorre) mainly composed of scrubs, essentially with a Mediterranean-Atlantic distribution (Salicornia, Limonium vulgare, Suaeda and Atriplex communities).	EU Habitats Directive, Annex I habitat type (code 1420) in Unfavourable-Bad state in the Mediteranean
Salicornia and other annuals colonizing mud and sand	☑	Formations composed mostly or predominantly of annuals, in particular Chenopodiaceae of the genus Salicornia or grasses, colonizing periodically inundated muds and sands of marine or interior salt marshes.	EU Habitats Directive, Annex I habitat type (code 1310), in unfavorable state in the Mediterranean

Optional text box to provide further information

Source Sovinc et al. 2017

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

4.1 - Ecological character

The Salinas ecological processes are characterized by the salt production. Through the annual cycle of flooding and evaporation, the ecological value is maintained.

The area is covered by grassland, halophyte associations (basin surface), reeds (basin surface and channels), tamarix and softwood and pioneer vegetation. Due to the abandonment of salt production, it can be expected that the halophytic vegetation will decrease over time. The process can be reversed with a revitalization of the salt production.

The western part of Solana Ulcinj is surrounded by extensive marshes and forests (reeds, tamarix, soft- and hardwood alluvial forest, the Montenegrin oak-hornbeam forest being particularly important). Regularly flooded meadows and pastureland with hedgerow and alluvial forest characterize the eastern part of the Site.

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

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
5: Salt exploitation sites	Ulcinj Solana (EN), Ulcinjska solana (ME), Kriporia Ulqin (AL)	1	1477	Representative

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Salt factory	7

(ECD) Habitat connectivity	The Ulcinj Salina is in the vicinity of the Velika plaža, Šasko jezero and Bojana River delta. These three locales are proposed as one potential special protected area (SPA) under the EU wild birds directive (Rubinić et al. 2019).

4.3 - Biological components

4.3.1 - Plant species

Invasive alien plant species

Scientific name	Common name	Impacts	
Erigeron annuus	Annual Fleabane	No impacts	No change
Solidago canadensis	Canadian horseweed	No impacts	No change

Optional text box to provide further information

Source: Sovinc et al. 2017

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/ACTINOPTERYGII	*Aphanius fasciatus*	Mediterranean banded killifish				
CHORDATA/MAMMALIA	*Canis aureus*	Golden Jackal;Eurasian Golden Jackal				
CHORDATA/AVES	*Merops apiaster*	European Bee-eater	36	daily max.		
CHORDATA/AVES	*Motacilla flava*	Western Yellow Wagtail	100000	daily max.	0.1	minimum estimate, Sackl unpubl.
CHORDATA/AVES	*Riparia riparia*	Bank Swallow	980	daily max.		
CHORDATA/AVES	*Tadorna tadorna*	Common Shelduck	620	daily max.		

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts	
ARTHROPODA/MALACOSTRACA	*Callinectes sapidus*	American blue crab;blue crab;hardshell or softshell crab;softshell crab;hardshell crab	Potentially	No change

Optional text box to provide further information

Source: Sovinc et al. 2017 if not mentioned otherwise.

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Csa: Mediterranean (Mild with dry, hot summer)

Annual average precipitation in Ulcinj is 1231 mm. The monthly hours of sunshine average 2571 hours per year, the highest in Montenegro.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 0

a) Maximum elevation above sea level (in metres): 5

- Entire river basin ☐
- Upper part of river basin ☐
- Middle part of river basin ☐
- Lower part of river basin ☐
- More than one river basin ☐
- 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.

The salina is situated in the Mediterranean costal area of Montenegro which was a lagoon named “Zoganj mud” before transformed for salt production.

4.4.3 - Soil

- Mineral ☑
- Organic ☑
- 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?	
Usually seasonal, ephemeral or intermittent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from rainfall	☑	No change
Water inputs from surface water	☑	No change
Marine water	☑	No change
Water inputs from groundwater	☑	No change

Water destination

Presence?	
Marine	No change

Stability of water regime

Presence?	
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 ecological character of the Ulcinj salina is defined by the maintenance and control of the water regimes. In this area, hydrological conditions are not determined fully by a natural hydrological cycle, but are managed by man, following traditional patterns related to sustainable salt production and harvesting (Sovinc et al. 2017). The salt production process and the effects on the hydrology are described in detail in the not jet adopted management plan of Štumberger et al. 2008.

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site ☐
- Significant accretion or deposition of sediments occurs on the site ☐
- Significant transportation of sediments occurs on or through the site ☐
- Sediment regime is highly variable, either seasonally or inter-annually ☐
- Sediment regime unknown ☑

(ECD) Water turbidity and colour: Colour of water is highly variable depending on water depth, salt content and other factors.

(ECD) Light - reaching wetland: Full sun light reaching site.

(ECD) Water temperature: fluctuating

4.4.6 - Water pH

- Acid (pH<5.5) ☐
- Circumneutral (pH: 5.5-7.4) ☐
- Alkaline (pH>7.4) ☑

Unknown ☐

Please provide further information on pH (optional):

Due to former salt production the basins of the salina are alkaline (Rubinić et al. 2019).

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☐
Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☑
Euhaline/Eusaline (30-40 g/l) ☑
Hyperhaline/Hypersaline (>40 g/l) ☑
Unknown ☐

Please provide further information on salinity (optional):

During salt production the salinity of the water is highly variable due to flooding of the area with sea water and consequent evaporation. It can reach more than 250g/l during the final stage of the salt production.

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☐
Mesotrophic ☐
Oligotrophic ☐
Dystrophic ☐
Unknown ☑

Please provide further information on dissolved or suspended nutrients (optional):

The dissolved nutrients in the water is highly variable and depends also on the amount of sea water pumped into the salina.

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 site itself: i) broadly similar ○ ii) significantly different ◉

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

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

Land cover of the Ulcinj salina area based on Corine Land Cover has been mapped (Sovinc et al. 2017) and reveals that the Salina is surrounded mainly by agricultural land incl. pastures, some inland wetland and scrub-land. Urban areas from the city of Ulcinj and its suburbs are close by, but not adjacent. There is some influx of un-cleaned waste water from houses close to the salina.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	High

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	not relevant for site

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	not relevant for site

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	not relevant for site

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ◉ No ○ Unknown ○

Where economic studies or assessments of economic valuation have been undertaken at the site, it would be helpful to provide information on where the results of such studies may be located (e.g. website links, citation of published literature):

see Sovinc et al. 2017
You can find the article in the Additional material section.

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 ☑

Description if applicable

As the River Bojana flows through the lowland area, large sediment amounts aggregate on the way to the sea, and only sand and fine particles find their way to the sea. These sediments, which consist of fine particles, are carried to the west by the currents of the river mouth, where the border island (Velika plaža) was formed in front of the bay. The sea and wind transmitted and deposited the rest of the sediments, closing the border island and forming a shallow bay (Zoganj mud), today's salina.
All of this has created a unique environment of muddy marshes in the former bay. In the 19th century, Zoganj mud was an impassable wetland (about 25 km2) with brackish water and was a habitat for malarial mosquitoes. The works on amelioration started in 1913. That is when the wetland connected with the sea by the Port Milena canal and isolated itself from the Bojana River with a dike, with the original intention to dry the area with the aim of combating malaria. In 1920 the decision to start with the establishment of the salina in Ulcinj was made. In 1926 the process of purchasing the land from private landowners began and construction work started the next year. The salina was concluded in 1934 and the first harvesting of salt was done in 1935 (Radović, 2008).

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☑

Description if applicable

In the early 20th century, the Government of the Kingdom of Yugoslavia ordered the exploration of the territory with the aim of finding the optimal location for the construction of a saltpan. Research from Ankaran (today's Slovenia) to Ulcinj was performed by Guido Grisogono and Ante Koludrović. After six years of work, they selected the Zogaj mudflats, the place where the present Ulcinj Salina is located. The territory of the Zogaj mudflats swamp was significantly reduced, and today only fragments remain.
In 1920 the decision to start with the establishment of the salina in Ulcinj was made.
In 1926 the process of purchasing the land from private landowners began and construction work started the next year. The salina was concluded in 1934 and the first harvesting of salt was done in 1935. The technological process of production was upgraded in the 1970s with construction of the refinery and with attempts to expand the production, both by enlarging the territory of the salina and use of industrial production, based on mechanic thermos-compression principles, applied between 1984 and 1994. Yearly production of salt before the above-mentioned attempts to expand the production (in the period 1935 to 1983) was highly dependent on the weather conditions and organisation of work; a maximum of 41.240 tons of salt was produced in 1952. A combination of manually collected salt and the salt produced through industrial process in the newly constructed factory in the years 1984 to 1994 led to a maximum yearly production of 59.353 tons. By contrast, the production in the last years of production (2003 to 2013) was dramatically lower, reaching on average only around 17.000 tons per year (Radović, 2008).
1959 the reconstruction works and expansion of the salt pans were done (9,3 km2).
1979 On 15 April, an earthquake heavily damaged the salt pans and the salina's other infrastructure, so in 1980 started the reconstruction of evaporation basins which had been damaged by the earthquake and expansion of the salina by including adjoining marshlands, called kneta (14,5 km2).
Today the salina covers a surface of approximately 1,477 ha. Thus, the Ulcinj salina was created from the sea and represents a "cultural lagoon". It is surrounded by canals that drain the nearby marshes and knetas (adjoining marshlands), not allowing their water to mix with the water from the salina. The canals take the water into the Port Milena canal and then into the sea.

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☑

Description if applicable

The water regime and ecology of the former Lake Zogaj have been altered. By building a Solana Ulcinj, a former main lagoon in the Bojana Delta, has preserved the characteristics of the marsh.
After harvesting, the salt pans are without water. Numerous and heavy rains from autumn to spring, before commencement of salt production, converting the salt mill into a periodically to completely wetland, muddy and lake habitat, which changes day by day. A minimum of 1/3 of the salt pans is underwater, close to 1/3 is sludge and the rest depends on the rains: the pools can be dry, under shallow water or just silt.
For more than half a year, the vast silt beds are like tidal zones and excellent feeding grounds for numerous waterfowl. Solana is filled with water from the sea.
Strong pumps (3000 l / sec) start from the sea in early April extract water and marine organisms at all stages of their development. The water overflows shallow pools with an average depth of 20-30 cm. Water, which is salinity equal to the sea, translates, get from pool to pool mostly by gravity. From the entrance to the salt pans to its crystallization, goes more of tens kilometers and under the influence of the sun and always moderate to strong wind evaporates. From initial 3.8 g / l of salt, at the crust of production i.e. crystallization pools, water reaches concentration above 235 g / l salt. Also, the salt works are surrounded by a canal that drains the surrounding ones marshes / dumplings, not allowing their water to mix with salt water. The channels drain the water into the canal of Port Milena and then into the sea. Water management is a limiting and crucial factor for the nesting, feeding and resting of birds has a tremendous impact on bird migration.

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 ☐

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
Public land (unspecified)	☑	☐

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	Currently: Nacionalni parkovi Crne Gore 81000 Podgorica Crna Gora +382 20 60 10 15 +382 20 60 10 16 www.nparkovi.me In the future it is planned that the Salina will be managed by the municipality of Ulcinj.
Provide the name and title of the person or people with responsibility for the wetland:	Head of National Parks service, mr Elvir Klica, director general
E-mail address:	npcg@nparkovi.me

5.2 - Ecological character threats and responses (Management)

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

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Housing and urban areas	Low impact	Low impact	☐	☑

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Hunting and collecting terrestrial animals	High impact	High impact	☑	☑

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	☑	☑

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Dams and water management/use	High impact	High impact	☑	☐

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	Medium impact	High impact	☑	☐

Please describe any other threats (optional):

In the five years since salt production ceased, about one third of the crystallization area become covered with predominantly halophyte vegetation, which indicates a rather quick succession process. When key abiotic conditions in the crystallization change due to desalination, non-salt tolerating plant species will start to invade the area and this would eventually lead to a change in habitat type. The current Natura 2000 habitat type 1310 of the salina will be replaced by some common habitat type probably not listed as Natura 2000.
Similar basic conclusions can be made, for Evaporation III and Evaporation IV area, while in Evaporation II area, succession is already at an advanced stage. Succession in basins in Kneta and Evaporation I area is still at a relatively early stage, which is a consequence of the fact that water is present here for much longer that in other areas. Succession is advanced only in some narrow, marginal parts of the basins.
There is a clear evidence of a rapid succession when comparing reed stands and halophyte stands are in the past and today. According to CZIP (2017), area covered by halophytes used to be 60ha, in 2017 it was at least 112 ha. Reed stands area has changed from 8 ha to at least 62 ha in 2017.
With non-operational pumps, during winter precipitations, the basins fill with water, while during summer droughts, water completely evaporate. The changes from land environment to water and back again has huge influence on biodiversity of the area, by directing the succession and influencing survival of water plants such as sea lettuce (Ulva sp.) and widgeonweed (Ruppia sp.).

5.2.2 - Legal conservation status

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other international designation	Candidate Emerald Site ME0000004 Velika Plaza with Solana Ulcinj 2839,46 ha size	https://rm.coe.int/updated-list- of-officially-nominated-candidat e-emerald-sites-november-/16808f 184c	whole
Other international designation	Potential Special Protected Area under the Birds Habitat Directive (Rubinic et al. 2019)		whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Nature Park	Ulcinj Salina		whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Ulcinj Salina	http://datazone.birdlife.org/sit e/factsheet/ulcinj-saltpans-iba-montenegro	whole

5.2.3 - IUCN protected areas categories (2008)

Ia 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 ☐

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

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Catchment management initiatives/controls	Implemented
Hydrology management/restoration	Partially implemented

Species

Measures	Status
Threatened/rare species management programmes	Proposed

Human Activities

Measures	Status
Regulation/management of recreational activities	Implemented
Harvest controls/poaching enforcement	Implemented
Communication, education, and participation and awareness activities	Proposed
Research	Implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

Has a management effectiveness assessment been undertaken for the site? Yes ○ No ◉

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

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

Štumberger et al. 2008 is giving a draft management plan, but it is not an official document jet.

URL of site-related webpage (if relevant): https://savesalina.net/

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but restoration is needed

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Animal species (please specify)	Implemented
Birds	Implemented
Plant community	Implemented

Birds at the site are regularly monitored by scientists and also the Environmental Protection Agency, National Park administration of the country and the NGO CZIP. For plant communities and other animal species Sovinc et al. 2017 has gathered a large array of information on fauna and flora, which can be used baselines.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Birdlife International (2015): European Red List of Birds, Luxembourg, 75 p.
Caković D., Milošević, D. (2013): Studia biodiverzitea I zaštite prirode obalnih područja Crne gore. Podgorica. 348 p.
European Union (2013): Interpretation Manual of European Union Habitats, ver. 27, 146 pages
Horvat, I., Glavač, V. & Ellenberg, H. (1974): Vegetation Südosteuropas. Gustav Fischer Verlag, Stuttgart, 768 p.
Janković, M., Stevanović, V. (1983) Prilog poznavanju slatinske vegetacije Boke Kotorske.-Zbornik Roberta Visianija Šibenčanina, Muzej grada Šibenika 10:377-396 p.
Matvejev, S.D. (1995): Kratka zoogeografija sa osnovama biogeografije I ekologije bioma Balkanskog poluostrva. Samozaložba. 166 p.
Rubinić, B., Sackl, P. & Gramatikov, M. (2019): Conserving of wild birds in Montenegro. The first inventory of potential Special Protection Areas in Montenegro. AAM Consulting. Budapest xiii, 328 p.
Sackl, P., Bordjan, D., Basle, T., Božič, L., Smole, J., Denac, D., Stumberger, B. (2017): Spring migration of ducks in the Bojana-Buna Delta – a comparison of migration volumes and conventional count information for a key wetland site within the Adriatic Flyway. In: Sackl, P., Ferger, S.W. (eds.): Adriatic Flyway – Bird Conservation on the Balkans. Euronatur, Radolfzell.
Sackl, P., Ferger, S., Bordjan. D., Maier, L., Orda-Dejtzer, C., Roth, K., Schwarz, U, Šoškić, M., Zeković, B. (in prep.): Breeding bird populations of the Ulcinj Salina, Montenegro. and their significance for shorebird conservation. 6 Euronatur publ. on the proceedings of the Adriatic Flyway 3 project.
Sackl, P., Schneider-Jacoby, M., Stumberger, B. (2014): Planbeobachtungen des sichtbaren Vogelzuges vor dem Mojana-Buna-Delta (Montenegro/ Albanien) and der südöstlichen Adria im März 2010. Der Ornitol. Beobachter 111(3): 187-232 p.
Schwarz, U., Sackl, P. (2017): Land structure, flooding and breeding bird survey in the salina Ulcinj 2016. Euronatur report.
Sovinć A., Davorin T., Hosek M. (2017): Protection study for Ulcinj Salina, published EU report, 207 p.
Stevanović, V., Vasić, V. (eds.) (1995): Biodiverzitet Jugoslavije sa pregledom vrsta od međunarodnog značaja. Ecolibri, Beograd, Biološki fakultet, Beograd, 562 p.
Studija zaštite (2015): "Studija Zaštite područja “Ulcinjskih solana”. Agencija za zaštitu prirodne sredine, 114 p.
Štumberger, B., Sackl, P., Saveljič, D., Schneider-Jacoby, M. (2008): Management plan for the conservation and sustainable use of the natural values of the privately owned Nature park “Solana Ulcinj”, Montenegro. Joannea-Zoologie 10. 88 p.
Štumberger, B., Saveljič, D., Schneider-Jacoby, M. (2006): Information Sheet on Ramsar Wetlands for 2006/08 Version, 43 p.
Vuksanović S., Petrović, D. (2007): The flora and vegetation of Salt works in Ulcinj. Natura Montenegrina 6. Podgorica, 53-62 p.
Walmsley, J.G. (1999): The ecological importance of Mediterranean salinas. Proc. Post Conf. Symp. SALTWORKS: Preserving Saline Coastal Ecosystems- Global NEST. 1999, Samos, 81-95 p.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)
<no file available>

iii. a description of the site in a national or regional wetland inventory
<no file available>

iv. relevant Article 3.2 reports
<no file available>

v. site management plan
<1 file(s) uploaded>

vi. other published literature
<3 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:


Overview with dry salt pan (Salicornia and Limonium formations). (*Til Dieterich, 28-04-2018*)


Overview with wet salt pan (Salicornia and Salsola formations). (*Til Dieterich, 28-04-2018*)


Overview with Tamarix scrubs and meadows on dam. (*Til Dieterich, 28-04-2018*)


Flamingos at the Ulcinj Solana (*CZIP, Igor Stojović , 08-05-2019*)


Reeds at Ulcinj Solana (*CZIP, Igor Stojović , 02-03-2016*)


Overview flooded basins Ulcinj Solana (*CZIP, Igor Stojović , 02-06-2015*)


Overview flooded basins Ulcinj Solana (*CZIP, Igor Stojović , 02-06-2015*)


Flooded basins at Ulcinj Solana (*CZIP, Igor Stojović , 02-06-2015*)


Close up of Flamingos wintering at Ulcinj Solana (*CZIP, Igor Stojović , 14-02-2014*)


Saltwort stands on dry basin floor at Ulcinj Solana (*CZIP, Igor Stojović , 23-08-2017*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation: 2019-07-01