

# **Ramsar Information Sheet**

Published on 3 April 2017 Update version, previously published on : 29 September 2006

# Hungary Upper Kiskunság alkaline steppes



Designation date Site number

6 October 2006 1646 Coordinates 47°04'15"N 19°09'E Area 13 177,00 ha

https://rsis.ramsar.org/ris/1646 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

The intermittent sodic-alkaline marshes and meadows of Kiskunság give a good special example of continental saline ecosystems which are characteristic, unique wetland habitat types of the Pannonic biogeographic region. It hosts several noteworthy endemic and regionally endemic plant and animal species and communities. The site is a very important area for waterbirds during both breeding and migration season. The migrating water birds numbers – especially regards to Anseriiformes and Charadriiformes species – reach 20.000 individuals.

# 2 - Data & location

# 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

# Compiler 1

Name	Zoltan Vajda
Institution/agency	Kiskunsági Nemzeti Park Directorate
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# 2.1.2 - Period of collection of data and information used to compile the RIS

From year	2006
To year	2014

# 2.1.3 - Name of the Ramsar Site

Official name (in English, French or	I Inner Kickunsári alkaline stennes
Spanish)	

Unofficial name (optional) Felsö-Kiskunsági szikes puszták

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

<sup>(Update)</sup> A Changes to Site boundary Yes O No O	
(Update) B. Changes to Site area the area has decreased	
<sup>(Update)</sup> The Site area has been calculated more accurately 🗹	
$^{(Update)}$ The Site has been delineated more accurately $\Box$	
<sup>(Update)</sup> The Site area has increased because of a boundary extension	
(Update) The Site area has decreased because of a boundary restriction	

# 2.1.5 - Changes to the ecological character of the Site

<sup>(Update)</sup> 6b i. Has the ecological character of the Ramsar Site (including no pplicable Criteria) changed since the previous RIS?

# 2.2 - Site location

#### 2.2.1 - Defining the Site boundaries

# b) Digital map/image

<1 file(s) uploaded>

# Former maps 0

#### Boundaries description

The site boundary follows the boundary of the national park. In the northeast, the site extends beyond the national park and follows physical boundaries (canals) and land registration plot boundaries there.

# 2.2.2 - General location

a) In which large administrative region does	Bács-Kiskun, Pest counties
ule site lie?	
b) What is the nearest town or population	Kunszentmiklós
centre?	

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  $_{\mbox{No}}$   $\textcircled{\mbox{P}}$ 

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):	13177
Area, in hectares (ha) as calculated from GIS boundaries	13177.72

# 2.2.5 - Biogeography

Biogeographic regions										
Regionalisation scheme(s)	Biogeographic region									
EU biogeographic regionalization	Pannonic									

#### Other biogeographic regionalisation scheme

European Commission DG Environment webpage http://ec.europa.eu/environment/nature/natura2000/sites\_hab/biogeog\_regions/index\_en.htm The biogeographic regionalisation scheme applied is the same used by the European Union (according to the Habitats Directive)

# 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 ecosystem services provided	In common with the Upper Kiskunság Alkaline Lakes Ramsar Site, this site also represents a rare example of the natural sodic-alkaline type wetlands within the Pannonic biogeographic region. The sodic plain has a rather variegated micro-relief. Differences of just a couple of dozen inches in elevation can produce different types of soils with distinctive floras to go with them. The high salinity and poor water economy of the soil allow only halophytic grass. It presents a nice variation of marshes, sodic meadows, grazing lands, sodic terraces and sodic barrens with a typical vegetation consisting of various salt-resistant and halophyte species. The sodic pans and salt marshes are the other important habitat types of the site from the point of view of birds and invertebrates as well. The site is important not only from the point of view of natural inland salt habitats, but is important for birds as a nesting, feeding and roosting site as well.	
	Habitat types listed on Annex I of the Habitats Directive:	
	1530 Pannonic salt steppes and salt marshes (EU Council Directive 92/43/EGK Annex I) 6250 Pannonic loess steppic grasslands (EU Council Directive 92/43/EGK Annex I)	

#### Criterion 2 : Rare species and threatened ecological communities

# Criterion 3 : Biological diversity

Justification	The site holds several species endemic to the Carpathian Basin, important for maintaining the biological diversity within the Pannonic biogeographical region. Sea Aster Aster tripolium ssp. pannonicum - Pannonic subendemic Enthostodon hungaricus – Pannonic endemic moss, listed in Hungarian Red Data Book Lepidium crassifolium - Pannonic endemic, biogeographically important Limonium gmelini ssp. hungaricum – Pannonic endemic, biogeographically important Plantago schwarzenbergiana – Pannonic endemic, biogeographically important and protected in Hungary Puccinellia limosa - Pannonic subendemic, biogeographically important	
	Puccinellia limosa - Pannonic subendemic, biogeographically important	Ľ
	Dorcadion fulvum cervae – Pannonic endemic, listed in 92/43/EGK directive Annex II	Ľ

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

# ☑ 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
Entosthodon hungaricus			8				listed in Hungarian Red Data Book	Criterion 3: The site holds this species endemic to the Carpathian Basin, important for maintaining the biological diversity within the Pannonic biogeographical region.
Lepidium cartilagineum			×					Criterion 3: The site holds this species endemic to the Carpathian Basin, important for maintaining the biological diversity within the Pannonic biogeographical region. Biogeographically important
Limonium gmelinii References			S					Criterion 3: The site holds this species endemic to the Carpathian Basin, important for maintaining the biological diversity within the Pannonic biogeographical region. Biogeographically important
Plantago schwarzenbergiana			×				protected in Hungary	Criterion 3: The site holds this species endemic to the Carpathian Basin, important for maintaining the biological diversity within the Pannonic biogeographical region. Biogeographically important
Puccinellia distans			Ø					Criterion 3: The site holds this species endemic to the Carpathian Basin, important for maintaining the biological diversity within the Pannonic biogeographical region. Biogeographically important
Tripolium pannonicum	Sea Aster		Ø					Criterion 3: The site holds this species endemic to the Carpathian Basin, important for maintaining the biological diversity within the Pannonic biogeographical region.

Species listed under Biological components which are not yet included in the Catalogue of Life: Phascum floerkeanum – moss species listed in Hungarian Red Data Book

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

Phylum	Scientific name	Common name	Species qualifies under criterion2469	Species contributes under criterion 3 5 7 8	Pop. Size Period o	f pop. Est. oc	% ccurrence 1)	IUCN Red / List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Birds												
CHORDATA/ AVES	Acrocephalus melanopogon	Moustached Warbler	ØØOO					LC			79/409/EGK Annex I	Criterion 2: The site holds this species. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Alcedo atthis	Common Kingfisher	VV					LC Sw			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Anser albifrons	Greater White- frontedGoose			21000		19.1	LC Strainer Strainer				Criterion 6: 21000 individuals occur regularly. Biogeographic region: Western Siberian/Central Europe

Phylum	Scientific name	Common name		Spe qua un	cies lifie der	5	S  cor	pecie ntrib unde	es utes er	Рор	Period of pop. F	%	IU ence R	ICN Red A	CITES	CMS Appendix	Other Status		Justification
				crite	erio	n	cr	riteri	ion	Size		1)	Li	ist	1	1			
CHORDATA/ AVES	Anser anser	Greylag Goose		4	6	9				9000	)	16.1	1	C time					Criterion 6: 9000 individuals occur regularly. Biogeographic region: Central Europe/North Africa
CHORDATA/ AVES	Ardea alba	Great Egret	V				0							C S			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Ardeola ralloides	Squacco Heron	J										L S	C the second sec			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Aythya nyroca 🌉 💁 🔊	Ferruginous Duck	I										N	UT SW		×	79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Charadrius alexandrinus 📲 🛄 죋	Kentish Plover; SnowyPlover	J	V									L 3	C W			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Charadrius morinellus	Eurasian Dotterel	Į														79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Ciconia ciconia 📲 👊 🏓	White Stork	J										L 9	C m			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Ciconia nigra 📲 💁 🤌	Black Stork	J										L 9	C S			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Circus aeruginosus	Western Marsh Harrier	J	I										C			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Egretta garzetta 📲 💁 🦻	Little Egret	V										2 0	C W			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Falco cherrug	Saker Falcon	V	) D					סכ				E	N CSF		$\checkmark$			Criterion 2: The site holds this species.
CHORDATA/ AVES	Grus grus	Common Crane	V				0						L 3	C S			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Haliaeetus albicilla	White-tailed Eagle	•	]			0						L	C W	Ø	ø	79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Himantopus himantopus	Black-winged Stilt	I	12			0						2	C S			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Hydrocoloeus minutus	Little Gull	V	I									L 3	C W			79/409/EGK Annex I		Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.

Phylum	Scientific name	Common name	Species qualifies under criterion 2 4 6 9	Species contributes under criterion 3 5 7	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red / List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Ichthyaetus melanocephalus	Mediterranean Gull	ØØOC								79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Ixobrychus minutus 📲 🕮 죋	Little Bittern	220C					LC			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Lanius minor	Lesser Grey Shrike	220C					LC Str			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Luscinia svecica	Bluethroat	220C								79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Microcarbo pygmeus	Pygmy Cormorant	ØØOC								79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Nycticorax nycticorax	Black-crowned NightHeron; Black-crowned Night-Heron	ØØOC					LC Star			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Otis tarda	Great Bustard	ØOOC							V	Annex I Birds Directive	Criterion 2: The site holds this species.
CHORDATA/ AVES	Pandion haliaetus	Osprey, Western Osprey	ØØOC					LC			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Philomachus pugnax	Ruff	220C					LC ●\$ ©®			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Platalea leucorodia 📲 🕮 죋	Eurasian Spoonbill	220C					LC Str			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Porzana parva 📲 🟪 🔊	Little Crake	220C					LC Str			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Porzana porzana 📲 🕮 ⋗	Spotted Crake	220C					LC Str			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Recurvirostra avosetta 🎆 💁 🔊	Pied Avocet	VVOC					LC Str			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
CHORDATA/ AVES	Sterna hirundo 📲 🤐 🔌	Common Tern	ØØOC								79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.

Phylum	Scientific name	Common name	Species qualifies under criterion 2 4 6 9	Species contributes under criterion 3 5 7 8	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Tringa glareola 🕌 🛄 🤌	Wood Sandpiper						LC ♥ä: ◎t#			79/409/EGK Annex I	Criterion 2: The site holds this species with international designation. Criterion 4: Notable breeding, migrating, wintering and resident birds on wetlands including this species.
Others												
ARTHROPODA / INSECTA	Dorcadion cervae										listed in 92/43/EGK directive Annex II	Criterion 3: The site holds this species endemic to the Carpathian Basin, important for maintaining the biological diversity within the Pannonic
CHORDATA/ MAMMALIA	Spermophilus citellus	European Ground Squirrel; European Souslik						VU •••• ••\$\$			Annex II Habitats Directive	Criterion 2: The site holds this species.

1) Percentage of the total biogeographic population at the site

79/409/EGK - EU Birds Directive 92/43/EGK - EU Habitats Directive
Species listed under Biological components which are not yet included in the Catalogue of Life: Saragossa porosa kenderiensis – Pannonic endemic

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

<no data available>

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

# 4.1 - Ecological character

The prevalence of different sodic alkaline wetland habitat structures depends on water levels and seasonal fluctuation, which may be very variable year to year.

Lepidio-Puccinellietum and Astero-Agrostetum albae sodic marshes: The feature of this habitat is that it has only temporary or ephemeral saline water-flooding zone (0-10 cm), usually from later autumn to later spring. After it has dried out saline crystals often occur high density on the bare surface, this reason is that the plants growing are strength hampered here. The characteristic vegetation, which can thrive in these extreme conditions consists mainly of terrestrial halophyte and succulent plants such as: Lepidio crassifolium, Puccinellia limosa, Camphorosma annua, which occur sporadically on the surface. This habitat is one of the most important shorebird feeding zone because it has seasonal shallow (0-10 cm) water coverage and bare surface, often only the surface is wet and the muddy ground is soft. This feeding habitat exists mainly in spring and autumn for the waterbirds, when there is higher water level on the site.

Puccinellietum limosae sodic marshes: This habitat is similar as Lepidio marshes, but it has longer and a bit deeper saline water-flooding (0-20 cm), usually from early autumn to beginning of summer, due to more vegetation biomass can be found here, especially high dominant of halophyte Puccinellia limosa. The sodium crystal accumulation is not so expressed on the surface only in the deeper level of the soil. The vegetation coverage abundance may be very variable.

Bolboschoenus-Phragmitetum sodic marshes: This habitat regularly is covered with shallow water (0-30 cm) or wet all over the year. Due to here can overgrow more abundant halophyte vegetation as on saline marshes 2. zone. The characteristic dominant plants are Bolboshoenus maritimus and saline ecotype of Phragmites communis, these may occurrence in very different coverage proportion. Open bed of pans: This habitat regularly is covered with deeper saline shallow water (10-50 cm) all over the year. This habitat is the major importance for waterbirds. In hot summer, when the water level may be dropped seriously, so pool-bed surfaces can be become only wet or

dried out. Other not characteristic wetlands types can be also found such as Alopecuretum pratensis meadow, Caricetum acutiformis ripariae and Cladium mariscus marshes.

(For further information, see additional material)

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

In	lar	d	wetlands	

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Saline, brackish or alkaline water > Lakes >> R: Seasonal/ intermittent saline/ brackish/ alkaline lakes and flats	Ss & R area considered together	1	3480	
Saline, brackish or alkaline water > Marshes & pools >> Sp: Permanent saline/ brackish/ alkaline marshes/ pools		2	2254	Representative
Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools		1	3480	

#### 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
1: Aquaculture ponds		3	488	
9: Canals and drainage channels or ditches		4	316	

#### 4.3 - Biological components

#### 4.3.1 - Plant species

#### Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Cirsium brachycephalum	Small-flowered Thistle	listed in 92/43/EGK directive Annex II
Tortula cernua		moss species listed in Hungarian Red Data Book

#### Invasive alien plant species

Scientific name	Common name	Impacts	Changes at RIS update
Elaeagnus angustifolia		Potentially	No change

#### 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	Acrocephalus arundinaceus	Great Reed Warbler				
CHORDATA/AVES	Acrocephalus schoenobaenus	Sedge Warbler				

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	Acrocephalus scirpaceus	Eurasian Reed Warbler				
CHORDATA/AVES	Actitis hypoleucos	Common Sandpiper				
CHORDATAAVES	Anas acuta	Northern Pintail				Birds Directive Annex I.
CHORDATA/AVES	Anas clypeata	Northern Shoveler				Birds Directive Annex I.
CHORDATA/AVES	Anas crecca	Eurasian Teal;Green- winged Teal				Birds Directive Annex I.
CHORDATAAVES	Anas penelope	Eurasian Wigeon				Birds Directive Annex I.
CHORDATA/AVES	Anas querquedula	Garganey				Birds Directive Annex I.
CHORDATA/AVES	Anser fabalis	Bean Goose				Birds Directive Annex I.
CHORDATAAVES	Anthus pratensis	Meadow Pipit				
CHORDATA/AVES	Anthus spinoletta	Water Pipit				
CHORDATA/AVES	Ardea cinerea	Gray Heron; Grey Heron				
CHORDATA/AVES	Arenaria interpres	Ruddy Turnstone				
CHORDATAAVES	Aythya ferina	Common Pochard				Birds Directive Annex I.
CHORDATA/AVES	Aythya fuligula	Tufted Duck				Birds Directive Annex I.
CHORDATA/AVES	Calidris alba	Sanderling				
CHORDATAAVES	Calidris alpina	Dunlin				Birds Directive Annex I.
CHORDATA/AVES	Calidris ferruginea	Curlew Sandpiper				
CHORDATAAVES	Calidris minuta	Little Stint				
CHORDATAAVES	Calidris temminckii	Temminck's Stint				
CHORDATAAVES	Charadrius dubius	Little Ringed Plover				
CHORDATAAVES	Charadrius hiaticula	Common Ringed Plover				
CHORDATAAVES	Chlidonias leucopterus	White-winged Tern				
CHORDATA/AVES	Chroicocephalus ridibundus	Black-headed Gull				Birds Directive Annex I
CHORDATA/AVES	Cygnus olor	Mute Swan				
CHORDATAAVES	Fulica atra	Eurasian Coot				Birds Directive Annex I.
CHORDATAAVES	Gallinago gallinago	Common Snipe				Birds Directive Annex I.
CHORDATA/AVES	Gallinula chloropus	Common Moorhen				Birds Directive Annex I.
CHORDATA/AVES	Larus cachinnans	Caspian Gull;Yellow- legged Gull				Birds Directive Annex I.
CHORDATAAVES	Larus canus	Mew Gull				Birds Directive Annex I.
CHORDATAAVES	Larus fuscus	Lesser Black-backed Gull				Birds Directive Annex I.
CHORDATAAVES	Limicola falcinellus	Broad-billed Sandpiper				Birds Directive Annex I
CHORDATAAVES	Limosa limosa	Black-tailed Godwit				Birds Directive Annex I
CHORDATAAVES	Locustella fluviatilis	River Warbler				Birds Directive Annex I
CHORDATAAVES	Locustella luscinioides	Savi's Warbler				
CHORDATAAVES	Motacilla flava	Western Yellow Wagtail				
CHORDATAAVES	Numenius arquata	Eurasian Curlew				Birds Directive Annex I
CHORDATAAVES	Numenius phaeopus	Whimbrel				Birds Directive Annex I
CHORDATAAVES	Phalacrocorax carbo	Great Cormorant				
CHORDATAAVES	Pluvialis squatarola	Grey Plover				Birds Directive Annex I
CHORDATAAVES	Podiceps cristatus	Great Crested Grebe				
CHORDATAAVES	Podiceps grisegena	Red-necked Grebe			<u> </u>	
CHORDATAAVES	Podiceps nigricollis	Black-necked Grebe;Eared Grebe				

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATAAVES	Rallus aquaticus	Water Rail				Birds Directive Annex I
CHORDATA/AVES	Remiz pendulinus	Eurasian Penduline Tit				
CHORDATA/AVES	Tachybaptus ruficollis	Little Grebe				
CHORDATA/AVES	Tringa erythropus	Spotted Redshank				Birds Directive Annex I
CHORDATA/AVES	Tringa nebularia	Common Greenshank				Birds Directive Annex I
CHORDATA/AVES	Tringa ochropus	Green Sandpiper				
CHORDATA/AVES	Tringa stagnatilis	Marsh Sandpiper				
CHORDATA/AVES	Tringa totanus	Common Redshank				Birds Directive Annex I
CHORDATAAVES	Vanellus vanellus	Northern Lapwing				Birds Directive Annex I
CHORDATAACTINOPTERYGII	Cobitis taenia	Spine loach				listed in 92/43/EGK directive Annex II
CHORDATAACTINOPTERYGII	Leuciscus aspius	Schied;Schied;Schied				listed in 92/43/EGK directive Annex II
CHORDATAACTINOPTERYGII	Msgumus fossilis	European weather loach				listed in 92/43/EGK directive Annex II
CHORDATAACTINOPTERYGII	Rhodeus amarus	European bitterling				listed in 92/43/EGK directive Annex II
CHORDATA/AMPHIBIA	Bombina bombina	European Fire-bellied Toad				listed in 92/43/EGK directive Annex II
CHORDATAREPTILIA	Emys orbicularis	European Pond Terrapin				listed in 92/43/EGK directive Annex II
CHORDATA/MAMMALIA	Lutra lutra	European Otter				listed in 92/43/EGK directive Annex II
CHORDATA/MAMMALIA	Mustela eversmanii	Steppe polecat				– listed in 92/43/EGK directive Annex II
CHORDATA/AMPHIBIA	Triturus dobrogicus	Danube crested newt				listed in 92/43/EGK directive Annex II

# 4.4 - Physical components

#### 4.4.1 - Climate



The climate variations are limited in the region of the Carpathian Basin. The macroclimate can be considered a homogenous basic feature in terms of surface and fauna evolution, as well.

The region has a temperate continental climate. Its unique features are limited cloudiness, a relatively high number of sunshine hours, high daily and annual temperature variation, relative dryness and very low humidity values.

See additional material under "physical features of the site" for further information on climate.

# 4.4.2 - Geomorphic setting a) Mnimum elevation above sea level (in 95 metres) a) Maximum elevation above sea level (in 95 metres) Entire river basin Upper part of river basin Model part of river basin Lower part of 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 sodic plain belongs to River Danube catchment area. The general physical features of the site is characteristic for almost whole catchment area of the pans, but have to put emphasis on sodic wetlands have more extensive groundwater catchment area than on the surface. The local wetland catchment area has two main parts, on the major part is the lowland River Danube basin, and on the eastern part is the plain sandy ridge plateau.

#### (Update) Changes at RIS update No change Increase O Decrease O Unknown O

Organic 🗹

(Update) Changes at RIS update No change 
 Increase O Decrease O 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 O No @

#### Please provide further information on the soil (optional)

Chernozem meadow soil types, which are surfaces developed on a sandy loess base situated in the highest level layers in the region, with a high humus content. Their layer thickness varies between 20-40 cm. Solonetz meadow or carbonated solonetz soils, which appear in nonclassical forms, in patches, and are more of a transition between the meadow and sodic soils in various combinations, Solonchak-solonetz soils, sodic solonchak soils, solonchak soils of eroded salt berms. Among these calcareous-sodic solonchak-solonetz soils are the most common, giving the character of the sodic plains found here.

#### 4.4.4 - Water regime

Water permanence	
Presence?	Changes at RIS update
Usually seasonal, ephemeral or intermittent	
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 groundwater		No change
	Water inputs from surface water		No change

#### Water destination

Presence?	Changes at RIS update
Feeds groundwater	No change

#### Stability of water regime

Presence?	Changes at RIS update
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 sodic-alkaline alkaline wetlands are special type of continental salt waters, which is a typical Pannonic wetland type in Hungary. These pans have primarily groundwater and rainfall supplied water bodies. These are seasonal intermittent shallow waters (max. depth = 0.4-0.5 m), because there is notable seasonal water level fluctuation and frequently dries out entirely to middle of summer or autumn.

See additional material under "Physical features of the catchment area"

#### 4.4.5 - Sediment regime

#### Sediment regime unknown

#### Please provide further information on sediment (optional):

The susceptibility to re-suspension of sediments is different for each lake as it depends on the sediment type and on the shape and depth profile of a lake. Hypothetically, wave re-suspension occurs depends on the critical fetch (Fcrit) at which the wavelength exceeds twice the depth, relative to the total length of the lake measured in the direction of the wind. It causes that generally at lower find velocity there can be found a lower turbidity less re-suspended belt (Fcrit) around the shoreline below a critical water depth. The lowest turbidity can be found every time among emergent marshland vegetation. The non-turbid transparent sodic-alkaline waters have dull brown colour.

4.4.6 - Water pH

#### Alkaline (pH>7.4) 🗹

(Update) Changes at RIS update No change 
Increase O Decrease O Unknown O

#### Unknown 🗖

#### Please provide further information on pH (optional):

The total solute content of the region's ground water is relatively high. Even the smallest values are around 1000 mg/l. The highest values vary between 2000-10.000 mg/l. In the event of high ground water levels the ground water also brings solutes to the surface via its capillary ascent. The most important cations and anions in the ground water are Na+, Ca2+, Mg2+ and HCO3-, according to predominance Na+, HCO3- couple with high pH values (sodic water).

#### 4.4.7 - Water salinity

Mixohaline (brackish)/Mixosaline (0.5-30 g/l)

(Update) Changes at RIS update No change 
Increase O Decrease O Unknown O

Euhaline/Eusaline (30-40 g/l) 🗹

(Update) Changes at RIS update No change 
 Increase O Decrease O Unknown O

Unknown 🗖

#### Please provide further information on salinity (optional):

The sodic-alkaline alkaline wetlands are special type of continental salt waters, which is a typical Pannonic wetland type in Hungary. These pans have primarily groundwater and rainfall supplied water bodies. These are seasonal intermittent shallow waters (max. depth = 0.4-0.5 m), because there is notable seasonal water level fluctuation and frequently dries out entirely to middle of summer or autumn. The salinity regurlary varies between hypo- (0,8-20 g.I-1), sometimes in mesosaline ( 20-50 g.I-1) ranges corresponding with water level. The total dissolved solids is dominated in sodium (Na+), calcium (Ca2+), carbonate (CO32-) ions, and high grey-brown coloured holomictic turbidity being permanently suspended by colloidal suspended ion complex. Some shallow opened water tables have very high turbidity attributed to countinuos resuspension of the sediments by the winds coupled with its shallowness.

# 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 I

site itself:

Surrounding area has greater urbanisation or development  $\Box$ 

Surrounding area has higher human population density  $\hfill \Box$ 

Surrounding area has more intensive agricultural use  $\Box$ 

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

#### 4.5 - Ecosystem services

#### 4.5.1 - Ecosystem services/benefits

**Provisioning Services** 

Ecosystem service		Examples	Importance/Extent/Significance	
Wetland non-food products		Other	Medium	
Wetland non-food products		Livestock fodder	Medium	
	Wetland non-food products	Reeds and fibre	Medium	

#### **Regulating Services**

Ecosystem service		Examples	Importance/Extent/Significance
	Maintenance of hydrological	Groundwater recharge and	
	regimes	discharge	

#### Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance	
Recreation and tourism	Nature observation and nature-based tourism	Medium	
Scientific and educational	Long-term monitoring site	Medium	

#### Other ecosystem service(s) not included above:

No traditional fisheries, forestry production, religious importance, archaeological sites corresponding with the wetlands. Social relations with existing wetlands can be understood by traditional Hungarian extensive farmland lifestyle especially regard to domestic semi-nomadic animals grazing.

The extensive grassland, fishpond, reed harvesting and agricultural uses are involved.

General Hungarian biodiversity and bird monitoring program has been running on the site.

Some ecotourism, especially amateur birdwatchers visit the area and the fishing is permissible on three channels. The site has an important role in the retention and storage of inland water and regulation of the groundwater level of the surrounding area as well.

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 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
National/Federal government	×	
Provincial/region/state government	×	
Local authority, municipality, (sub)district, etc.	×	

#### Private ownership

Category	Within the Ramsar Site	In the surrounding area	
Other types of private/individual owner(s)	×	×	

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

within the Ramsar site: State owned and managed by the National Park Directorate 61 % Other state owned 19 % Privately owned 18 % Local goverment owned 2 %

in the surrounding area: basically privately owned

# 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	Kiskunság National Park Directorate
Provide the name and title of the person or people with responsibility for the wetland:	Zoltan VAJDA
Postal address:	H-6000 Kecskemét, Liszt F. u.19.
E-mail address:	vajdaz@knp.hu

# 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
Water abstraction	High impact	High impact	×	No change	×	No change
Canalisation and river regulation	Medium impact	Medium impact	X	No change		No change

Agriculture and aquaculture						
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Wood and pulp plantations	Medium impact	Medium impact		No change	V	No change

#### Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Mining and quarrying	Medium impact	Medium impact		No change	2	No change

Biological resource use						
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Hunting and collecting terrestrial animals	Medium impact	Medium impact	×	No change	<b>X</b>	No change

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Dams and water management/use	Medium impact	Medium impact	V	No change	V	No change
Unspecified/others	Medium impact	Medium impact	×	No change		No change
Fire and fire suppression	Medium impact	Medium impact	×	No change	×	No change

#### Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	Medium impact	Medium impact	×	No change	×	No change

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	×	No change	×	No change
Unspecified	Medium impact	Medium impact		No change	1	No change

#### Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Droughts	High impact	High impact	V	No change	×.	No change

#### Please describe any other threats (optional):

#### within the Ramsar site:

Groundwater decrease, water regulation, extensive agricultural pollution and disturbing factors, drying out, low grazing pressure, alien species invasion (e.g. Eleagnus angustifolia), waterfowl hunting, increasing of mammalian (fox) and avian (crows) predators, burning.

The most important adverse factors threatening the site's ecological character is the ground water decreasing. In the area located between the Rivers Danube and Tisza the following factors are influencing the ground water level changes: precipitation, artesian water exploitation for water supply purposes, ground water exploitation mainly for irrigation purposes, increase of areas covered by forests, water management and other factors. From the beginning of the 1970s to the middle of the 1990s the precipitation level dropped below the average, nearly 1000 mm precipitation shortage was experienced in the area. As a result ground water level started to drop, significant amount of the previous lakes dried up. During this time extensive ground water stock exploitation also started for the purposes of irrigation, which also contributed to the further reduction of ground water level. In the area Danube-Tisza Interfluves the factors influencing ground water reduction are as follows and their respective share in percentage also indicated: weather (50%); artesian water exploitation:(25%); ground water exploitation (6%); changes to land utilisation (10%); water management (7%); other (hydrocarbon exploitation (2%).

in the surrounding area:

Increase of gravel exploitation, groundwater decreasing, water regulation, intensive agricultural pollution and disturbing factors, artificial forest planting, drying out, eutrophication, alien species invasion (e.g. Eleagnus angustifolia), waterfowl hunting, increasing of natural mammalian (fox) and avian (crows) predators, burning.

# 5.2.2 - Legal conservation status

Global legal designations			
Designation type	Name of area	Online information url	Overlap with Ramsar Site
UNESCO Biosphere Reserve	Kiskunság		partly

#### Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	Upper Kiskunság alkaline steppes		whole

# National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Environmentally Sensitive Area	UpperKiskunság alkaline steppes		whole
National Park	Kiskunsági		partly
Site of Community Importance	Upper Kiskunság alkaline steppes		whole

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

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Logu	i piùi	COUOI	

Measures	Status
Legal protection	Implemented

#### Other:

Natura 2000 management plan.

#### 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 O site?

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 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:

There are 5 observation towers and one nature trail on the site.

General information booklets are also available.

#### 5.2.6 - Planning for restoration

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

#### Further information

Extensive wetland restorations programmes were also carried out on 2000 ha of the site. The site and surrounding area are declared as an environmentally sensitive area, which gives an opportunity for a zoned compensation scheme for farmers.

#### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented
Animal community	Implemented
Plant community	Implemented

General Hungarian biodiversity and bird monitoring program has been running on the site.

# 6 - Additional material

# 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

see additional documents under other published literature

# 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 <no file available>

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:



Alkaline steppes with Avocets in the Kiskunság ( Kovács Sándor, 09-06-2011 )

# 6.1.4 - Designation letter and related data

Designation letter <1 file(s) uploaded>

Date of Designation 2006-10-06