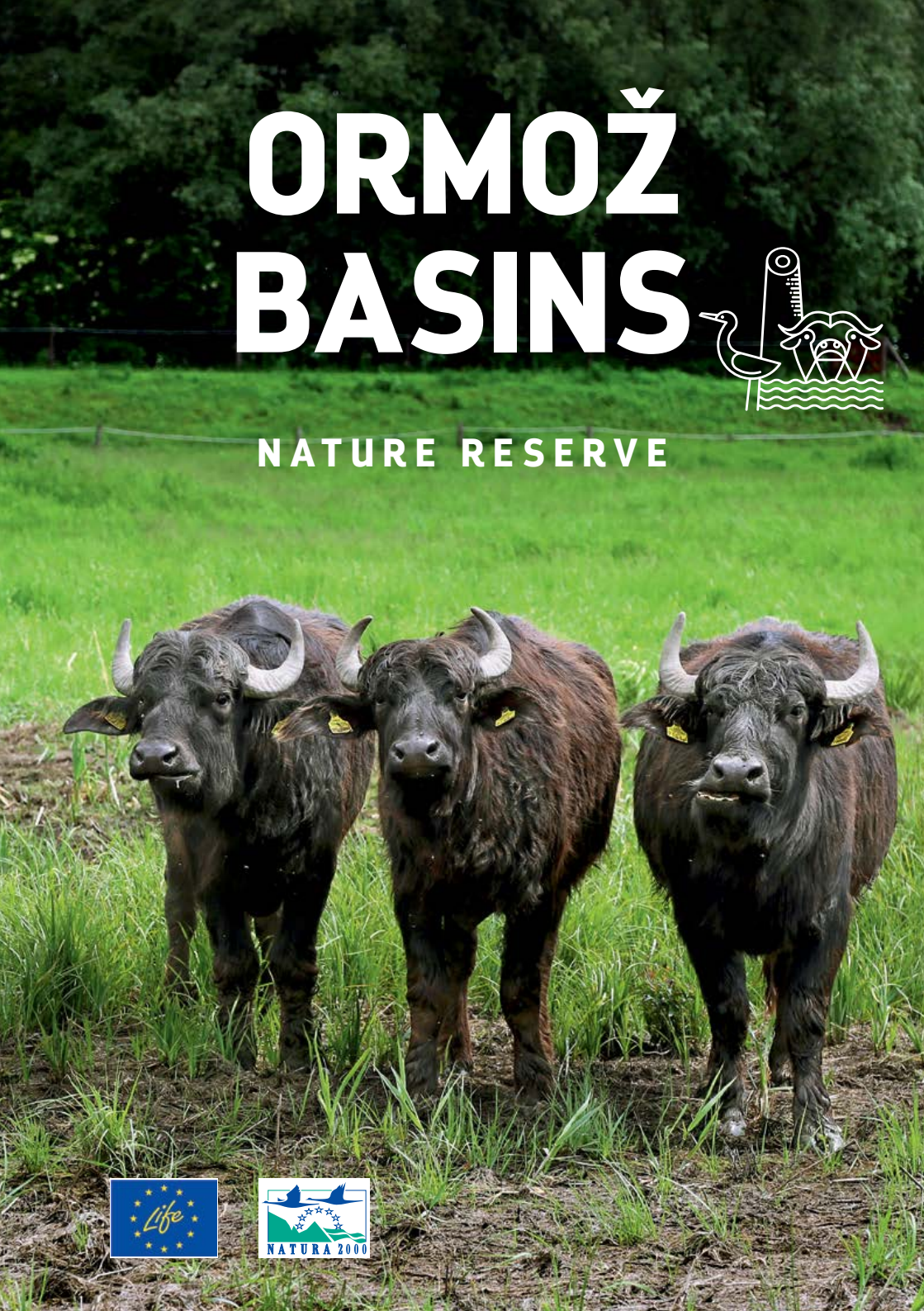
ORMOŽ BASINS

NATURE RESERVE



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DOPPS – BirdLife Slovenia

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First edition

Publisher: DOPPS - BirdLife Slovenia
Tržaška cesta 2, 1000 Ljubljana, Tel: 01 426 58 75,
e-mail: dopps@dopps.si, www.ptice.si

Print: Schwarz print d.o.o.
Typesetting: Nebia d.o.o.
Number of copies: 700
Ljubljana, august 2017

Guidebook was published with a financial contribution of LIFE, a financial instrument of European Union as a part of a project Riparian Ecosystem Restoration of the Lower Drava River in Slovenia, LIVEDRAVA, LIFE11 NAT/SI/882, www.livedrava.ptice.si. Leading partner: DOPPS - BirdLife Slovenia. Partners: VGB Maribor d.o.o., DRAVA vodnogospodarsko podjetje Ptuj, d.o.o., Municipality of Ptuj. Co-financiers: Dravske elektrarne Maribor d.o.o., Ministry of agriculture and environment, Municipality of Ormož. Project supporters: Slovenian Environment Agency, Municipality of Središče ob Dravi.

CIP - Kataložni zapis o publikaciji
Narodna in univerzitetna knjižnica, Ljubljana

502.2(497.412-751.3)

BOŽIČ, Luka, 1976-
Ormož basins : nature reserve / [authors Luka Božič, Damijan Denac ; preface Jurij Dogša ; illustrations Jan Hošek, Maja Marčič, Fabio Perco ; graphics Tilen Basle ; photos archive of TSO ... et al.]. - 1st ed. - Ljubljana : DOPPS - BirdLife Slovenia, 2017

Izv. stv. nasl.: Naravni rezervat Ormoške lagune

ISBN 978-961-6674-30-0
1. Gl. stv. nasl. 2. Denac, Damijan
292592896

Preface

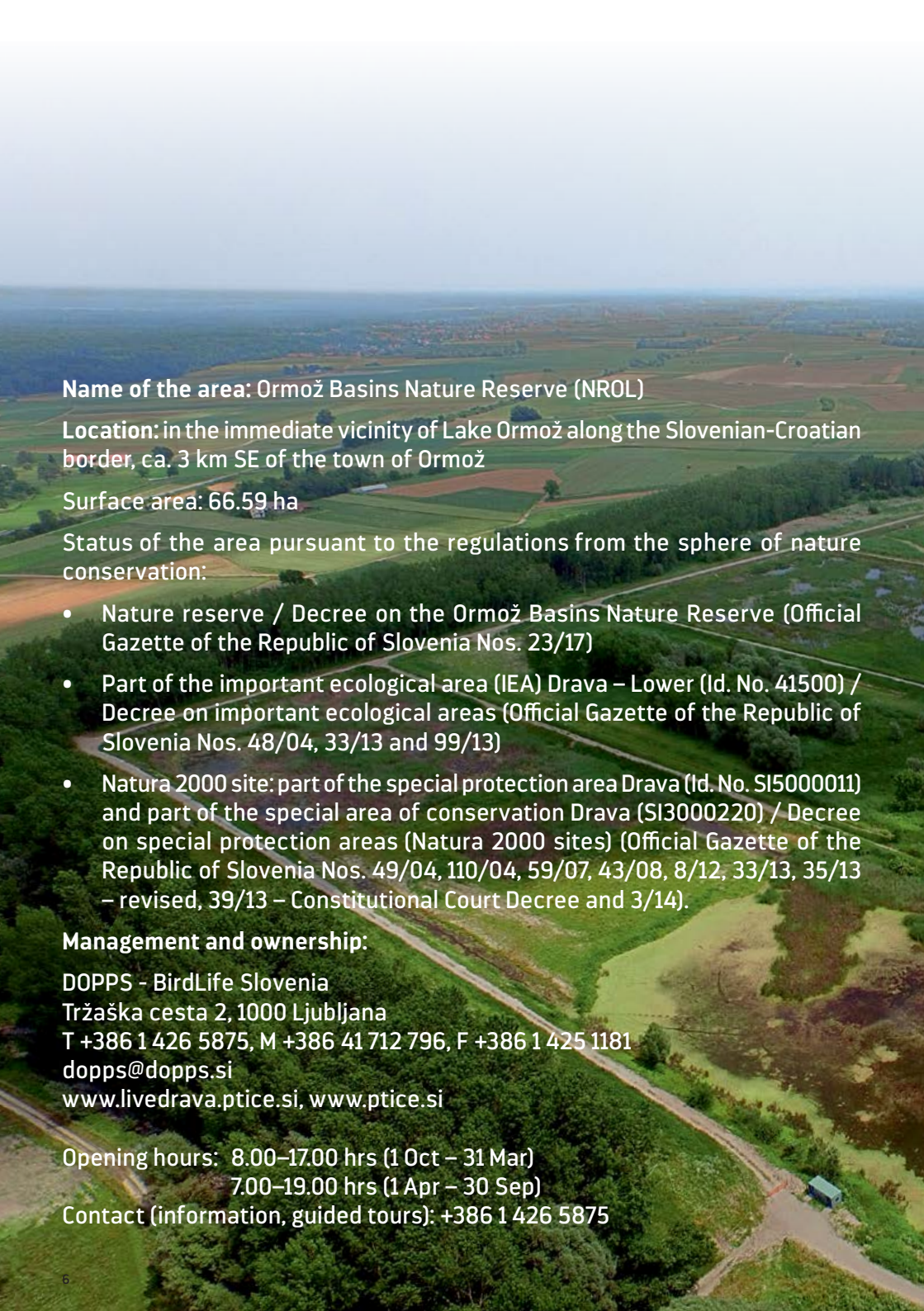
The Ormož Basins Nature Reserve is an exceptional case of a long-lasting cooperation between industry (ex. Ormož Sugar Factory) and nature conservation organization (DOPPS - BirdLife Slovenia). It is a good example of how natural and cultural heritage can be protected and conserved, as well as an educational display of contemporary conservation practice.

In the current environmentally unfriendly industrial development of mankind, such areas are gaining more and more importance. They are indispensable for emphasizing sustainable close-to-nature development, our awareness of the meaning of the plant and animal kingdoms for the future development of mankind, and for us to become aware that through professional and cooperative working nature and thereby all living beings can be provided with chances of surviving. It is the only way to provide for the long-term existence of mankind.

Slovenia is truly exceptional as far as its natural beauties are concerned, and the Ormož Basins Nature Reserve is just another stone in the mosaic of internationally important natural areas, only a few of which have unfortunately remained on a global scale.

I am deeply convinced that the Ormož Basins will offer a suitable shelter and habitat to many birds and other naturally occurring animals, while people will no doubt find in it a place for a pleasant disposition and a chance to reflect upon our joint sustainable development!

Jurij Dogša
Former Director of Ormož Sugar Factory



Name of the area: Ormož Basins Nature Reserve (NROL)

Location: in the immediate vicinity of Lake Ormož along the Slovenian-Croatian border, ca. 3 km SE of the town of Ormož

Surface area: 66.59 ha

Status of the area pursuant to the regulations from the sphere of nature conservation:

- Nature reserve / Decree on the Ormož Basins Nature Reserve (Official Gazette of the Republic of Slovenia Nos. 23/17)
- Part of the important ecological area (IEA) Drava – Lower (Id. No. 41500) / Decree on important ecological areas (Official Gazette of the Republic of Slovenia Nos. 48/04, 33/13 and 99/13)
- Natura 2000 site: part of the special protection area Drava (Id. No. SI5000011) and part of the special area of conservation Drava (SI3000220) / Decree on special protection areas (Natura 2000 sites) (Official Gazette of the Republic of Slovenia Nos. 49/04, 110/04, 59/07, 43/08, 8/12, 33/13, 35/13 – revised, 39/13 – Constitutional Court Decree and 3/14).

Management and ownership:

DOPPS - BirdLife Slovenia
Tržaška cesta 2, 1000 Ljubljana
T +386 1 426 5875, M +386 41 712 796, F +386 1 425 1181
dopps@dopps.si
www.livedrava.ptice.si, www.ptice.si

Opening hours: 8.00–17.00 hrs (1 Oct – 31 Mar)
7.00–19.00 hrs (1 Apr – 30 Sep)
Contact (information, guided tours): +386 1 426 5875

Habitats: freshwater wetland with open water surface, reed beds, bulrush stands, extensively farmed grasslands, floodplain forest, scrubs

Birds (220 species):

- ***Breeders:*** Ferruginous Duck *Aythya nyroca*, Gadwall *Anas strepera*, Little Bittern *Ixobrychus minutus*, Marsh Harrier *Circus aeruginosus*, Water Rail *Rallus aquaticus*, Spotted Crake *Porzana porzana*, Black-winged Stilt *Himantopus himantopus*, Redshank *Tringa totanus*, Black-headed Gull *Chroicocephalus ridibundus*, Common Tern *Sterna hirundo*, Middle Spotted Woodpecker *Dendrocopos medius*, Black Woodpecker *Dryocopus martius*, Savi's Warbler *Locustella luscinioides*, Bearded reedling *Panurus biarmicus*
- ***Migration and wintering:*** Wigeon *Anas penelope*, Teal *A. crecca*, Garganey *A. querquedula*, Lapwing *Vanellus vanellus*, Ruff *Calidris pugnax*, Snipe *Gallinago gallinago*, Wood Sandpiper *Tringa glareola*

Other

- Eurasian Otter *Lutra lutra*, European Pond Turtle *Emys orbicularis*, Eurasian Beaver *Castor fiber*
- *Beetles*: Flat Bark Beetle *Cucujus cinnaberinus*, *Cybister laterimarginalis*, King Diving-beetle *Dytiscus dimidiatus*, Great Silver Water Beetle *Hydrophilus piceus*
- *Plants*: Featherfoil *Hottonia palustris*, Poison Hemlock *Conium maculatum*

Infrastructure

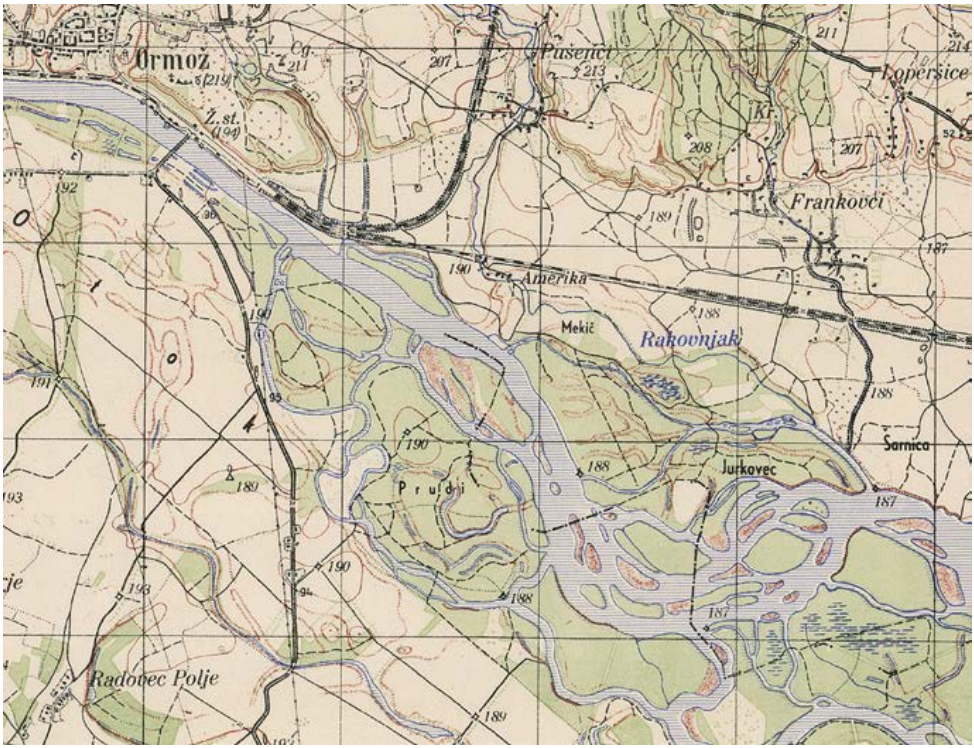
- ***Visitors:*** entry point with car park, educational trail (1.5 km), observation hides (4), info tables, nature reserve's garden with a pen for domestic animals
- ***Management:*** project office, stable, pasture electric fence (12.8 km), siphon, inlet piping, basin draining system

History of the area

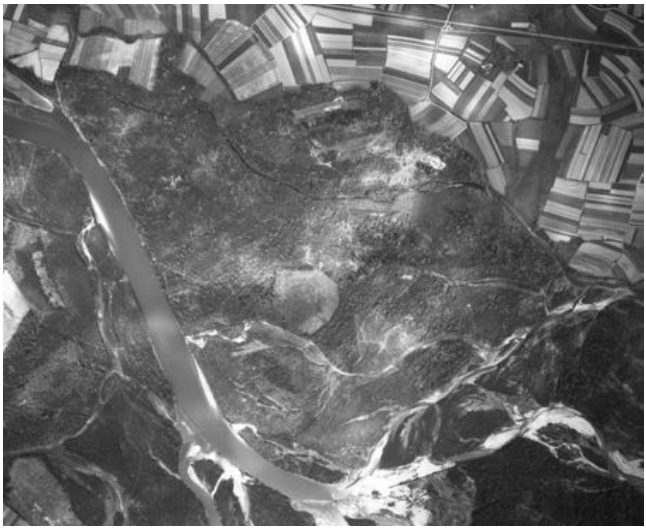
In former times (–1970)

Prior to the construction of facilities for the needs of the Sugar Factory in Ormož (TSO), this was practically the site of primordial Drava riverine woodlands. The extensive gravel bars were nest-sites of Stone Curlew *Burhinus oedicnemus* and colonies of Common Tern *Sterna hirundo*, while among the numerous fish species the Sterlet *Acipenser ruthenus* could be found as well. Until World War II, numerous rafts sailed down the Drava River.

During the rule of the Austrian Empire in the first half of the 19th century, the River Drava was making its way through the area of the present-day basins (Map of the Habsburg Empire, Second Military Survey, 1806–1869).



Before World War II, the floodplain forest "Jurkovec", where the reserve is now located, was 800 m wide. In places, the natural river bed's width exceeded 600 m. The branched out river was characterized by gravel islets: some of them exceeded the surface area of 10 hectares and were 750 metres long (source: tophographic map, 1940).



In 1969, the floodplain forest was managed by the Forestry Administration. Smaller areas along the Drava River were planted with deciduous trees, predominantly poplar. In this part, the Drava still flowed unrestrictedly (©Surveying and Mapping Authority of the Republic of Slovenia).

The beginning ... (1970–1979)

In 1970, the construction of Varaždin Hydropower Plant (Croatia) commenced, within the framework of which Lake Ormož Reservoir was also built by 1975. In the social plans released in 1976 by the Socialist Republic of Slovenia for the 1979–1980 period, it was stipulated that crop production would greatly increase, including sugar beet, for which a sugar factory would be built. In 1977, the Sugar Factory in Ormož (TSO) indeed began to be constructed within the framework of the former SLOVIN association. Its financing was provided by the so-called "sugar dinar fund". These were the means from domestic and foreign loans as well as contributions from 129 domestic firms.

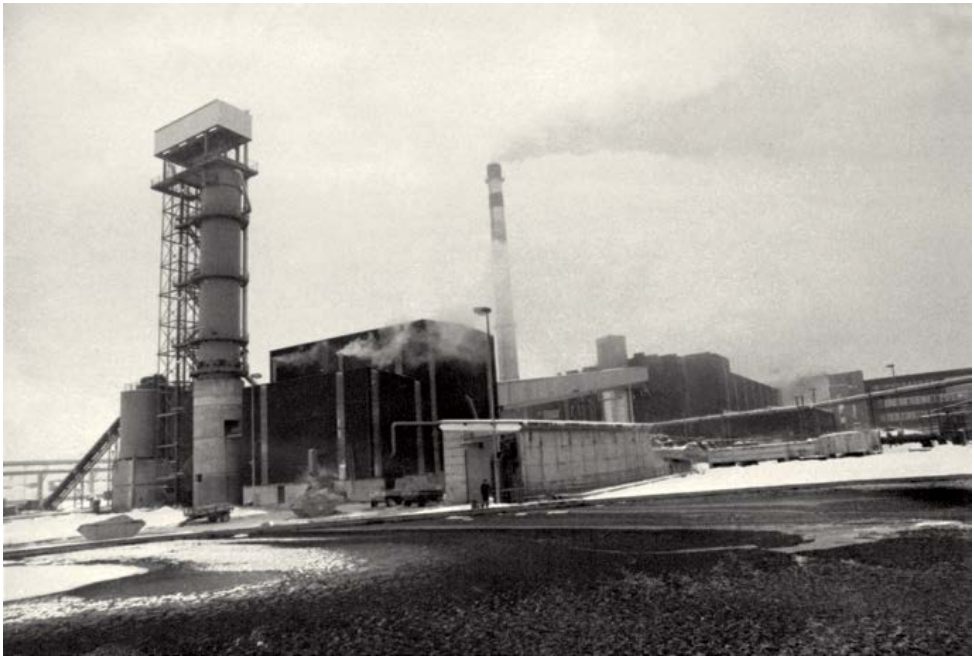
The artificial Lake Ormož, which is territorially divided between Slovenia and Croatia, utterly changed the image of the Drava in this area. The river became trapped between asphalt embankments and was relinquished to the regime of the Hydropower Plant.

The construction of Sugar Factory in Ormož was entrusted to the recognized West German company BMA from Braunschweig, in cooperation with several Slovenian firms. The construction was concluded in 1979.

For the purpose of TSO construction, extensive areas of the floodplain forest were reclaimed and covered with earth, and eventually wastewater basins built. This was the origin of Ormož Basins.

Ormož Sugar Factory (TSO) operates! (1980)

After a fairly modest start in the early second half of 1979, the first full season of sugar beet processing began in 1980 (the so-called campaign). TSO's processing capacities reached 4,000 tons/day, enabling annual processing of 320,000 tons of sugar beet and annual production of 42,000 tons of sugar. TSO was the only sugar producer in Slovenia



Ormož Sugar Factory (TSO) during operation.

Ormož Basins during sugar beet processing (campaign).

V SOBOTO

SOBOTA, 20. SEPTEMBRA 1980 — STRAN 5 | VEČER

Čez teden dni začetek puljenja sladkorne pese

„Sladka pot" do Ormoža

— Kako ste? Kakšno je razpoloženje?

Tako smo začeli pogovor s Terezijo Štefančič, ki vodi službo za surovinsko osnovo tovarne sladkorja v Ormožu. Službo torej, katere strokovnjaki in sodelavci skrbijo, da bi imela nova slovenska tovarna kar največ

morali ti manjši kombajni?

»Letos imamo 2250 kooperantov, ki imajo peso na 800 hektarih zemlje. Nekateri imajo po dve parceli, večina pa eno.«

— Za pridelovalce so pomembni tudi stranski proizvodi sladkorne pese. Jih bodo letos uporabili ali bodo

ključeno do desetega novembra.«

Cena sladkorne pese

Tovarna je pripravila za odkup sladkorne pese iz kooperacije 28 prevzemnih

na pričakovanjih za prihodnje leto?

»Plan poslovne skupnosti je za prihodnje leto setev sladkorne pese na 5800 hektarih zemlje. Mislim, da ta načrt lahko dosežemo.

Letos je večji interes za pridelovanje. Pomembno je, da je večja pripravljenost zlasti pri kmetih. Ob že omenjeni izho-

SREDA, 5. MARCA 1980 — STRAN 9 | VEČER

Tovarna sladkorja je kupila nove kombajne

Servis po radiu

Letošnje štirikratno povečanje njiv za sladkorno peso zahteva tudi močnejši strojni park — predvsem ob spravilu pridelka. Dosedanje izkušnje so namreč pokazale, da je pravo spravilo pese, cepran je v pridelovanju najmanj pomembno, najbolj problematično, ker zahteva izredno dobro organizacijo. Franc Šilak, vodja kmetijske mehanizacije pri tovarni sladkorja Ormož, nam je

jega transportnega sredstva (tovornjaki, vlaki. Spravilo s temi stroji je zentabilno na parcelah, večjih od 7 ha.

Kmetovalci-pridelovalci pese bodo gotovo veseli prijetne novosti, namenjene prav njim. To je dvajset novih dvovrstnih samohodnih kombajnov z zmogljivostjo 4 ha na dan. Doslej so kmetovalci razpolagali s 35 enorednimi vlečnimi kombajni, ki poberejo

najvišja stopnja racionalnosti te službe. Glede rezervnih delov se dogovarjajo z domačo industrijo; tako bi poleg uvažali samo tiste dele, ki jih ne moremo izdelati doma. Naj še povemo, da so šestredni kombajni zahodnonemške, dvovrstni italijanske, enorednji pa poljske proizvodnje; pa morda še to, da največji (šestredni kombajn stane blizu deset milijonov dinarjev.

Vesti iz Ormoža

Sladkor prodan

Tovarna sladkorja Ormož je že izpraznila svoja skladišča gotovega proizvoda. Sladkor so prodali vsem tistim porabnikom v Sloveniji, ki so vložili svoja sredstva v gradnjo tovarne zato, da so si pridobili pravico do sladkorja in tako niso več odvisni od naključij na trgu. Skupno je bilo iz ormoške tovarne letos poslano na trg 1820 ton sladkorja.

Odmevi — Odmevi — Odmevi — Odmevi

Trma za peso

Lani smo v naši republiki dobili prvo tovarno sladkorja. Ta pomembna investicija, druga največja v Sloveniji, v tem sredinjeročnem obdobju pomeni uresničevanje obveze naše republike, da si sama zagotovi čimveč hrane, je pa tudi pot, ki naj spodbudi širšejo intenzifikacijo našega poljedelstva, ker smo v tej panogi kmetijstva v Sloveniji najslabšeji in najbolj zaostajamo, pa je tudi zato naša živinoreja na manj trdnih osnovah, kot bi lahko bila in bi morala biti.

Sladkorna tovarna potrebuje mnogo surovin. Letos že domala tristo tisoč ton sladkorne pese, ki naj bi jo pridelali na sedem tisoč hektarjih v severovzhodni Sloveniji. To so znatne površine, dosedanja aktivnost in dogovori pa kažejo, da jih bo težko zagotoviti. Vendar ne zategadelj, ker ne bi imeli primerne zemlje, bolj zaradi težke bitke za spremembo zavesti kmetovalcev, da moramo nujno popraviti nalo setveno sestavo, da moramo izvleči iz zemlje več in da ni za vse večne čase edino veljavna in pametna usmeritev le v pridelovanje v glavnem belih žit, krmljenje živine siz vrečes — z dragimi močnimi krmili.

Sladkorna pesa nas najhitreje peljek tem ciljem. Ker pa je nova kultura, je prehod bolеč. Pri njem ne manjka tudi pomislekov, dilem in celo odporov, ko se nekateri kolektivi skušajo izogniti svojim širšim družbenim obvezam in nočejo zasejati dovoljenih količin sladkorne pese.

Kako daljnosežne, boleče in hude bi bile posledice takega obnašanja, ni treba posebej govoriti. Kaže pa, da bodo morali letos v Pomurju biti še posebej težko bitko, da bodo zagotovili svoj tretjinski delež pri oskrbi tovarne v Ormožu s sladkorno peso. Zatika se zlasti v kmetijskem gospodarstvu Rakičan, kjer bi morali letos zasejati s sladkorno peso 800 hektarov največ poleg kmetijskega kombinata Ptuj.

V Rakičanu so, kot smo slišali na včerajšnjem razgovoru v Murski Soboti, pripravljeni letos zasejati s sladkorno peso le 200 hektarov. Tako njihovo stališče, ki negira širšo družbeno odgovornost ter možnost sporazumevanja in dogovarjanja, sili k diferenciaciji in zaostreni odgovornosti, ki pa jo bodo v Pomurju prav gotovo sposobni dosledno izpeljati.

Tudi zato, ker doslej z izpolnjevanjem njihovih obveznosti do tovarne v Ormožu ni bilo večjih težav, poleg tega pa pokrajina ob Muri že leta najbolj dosledno uresničuje slovensko agrarno politiko. Trma in kratkovidnost enega kolektiva oznoma le nekaterih vodilnih delavcev v njem Pomurcev ne bo zaustavila.

M. Munda

Newspapers were regularly reporting about operation of newly built factory.

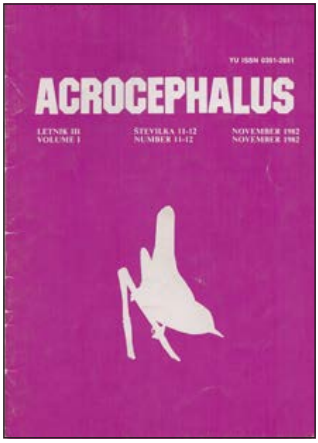
View of the second basin (so-called earth lagoon) of Ormož Basins.

First ornithological observations (1981)

Soon after its construction, the factory's wastewater basins began to attract various waterbird species, particularly waders and ducks. The extensive shallowly inundated areas with mudflats provided them with optimal feeding and resting sites, while some interesting species even bred here. An area of exceptional importance for birds at the national and wider scale was formed.

Gnezdilec male čigre *Sterna albifrons* ugotovljene tudi v Sloveniji

The Little Tern *Sterna albifrons* Also Found Nesting in Slovenia



Ormož basins are closely associated with the beginnings of systematic bird observations in NE Slovenia in recent times. The first contribution on the basins' birds, which was published by Acrocephalus, the journal of DOPPS - BirdLife Slovenia that was founded two years earlier, reported on the very Little Tern's breeding here. A regular monitoring of the area's avifauna has been taking place uninterruptedly till this day.

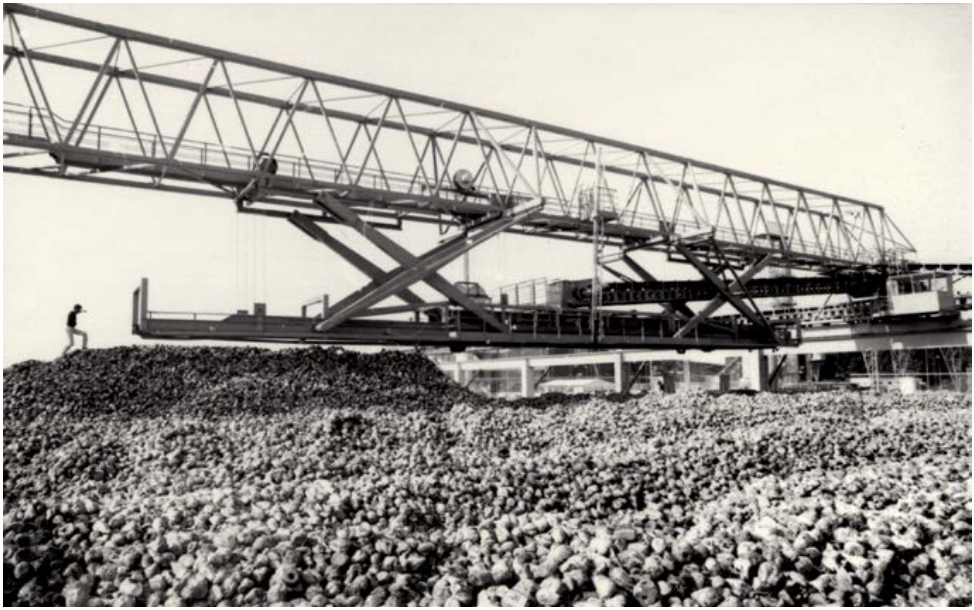
[2]

[1]

In 1981, a mixed colony of Common Tern *Sterna hirundo* and Black-headed Gull *Chroicocephalus ridibundus* **[1]** already bred in Ormož basins. Within the colony, a pair of Little Tern *Sternula albifrons* **[2]** was also detected, which was the first confirmed breeding of this species in Slovenia. The Little Tern never again bred in the continental part of our country.

The period of growth (1982–1990)

The years of operations started, when the main objective was to provide for sufficient quantities of sugar beet. For a long time, domestic sugar beet production did not match the factory's processing capacities, which is the reason why TSO was forced to conclude purchase agreements with sugar beet growers in Croatia as well. The business was successful and in 1989 all foreign and home loans for factory construction were paid off. On its paylist, TSO had 450 regularly employed and 200 seasonal workers.



Numerous farmers (around 2,000) fully relied upon the production in TSO, since the latter bought all sugar beet from them.


[1]


[2]

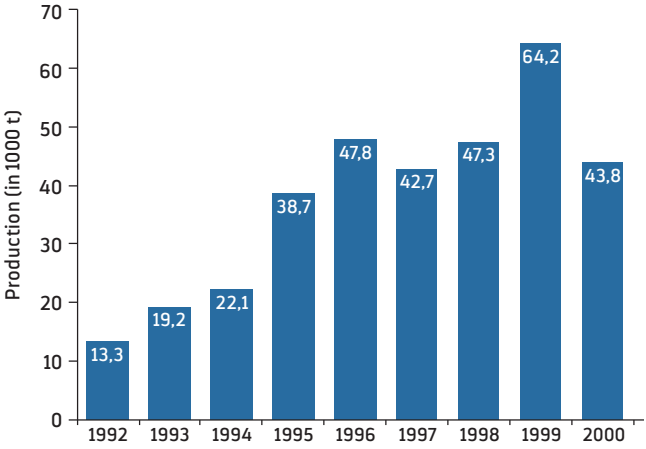
In the 1980s, some extremely rare or till then unknown species in Slovenia were registered in Ormož basins. The Broad-billed Sandpiper *Calidris falcinellus* **[1]** was recorded in the basins for the very first time in our country, while later on some more observations were made; the Little Bunting *Emberiza pusilla* **[2]** caught and ringed in 1986 was the second record for Slovenia, whereas the observation of the Stone Curlew *Burhinus oedicnemus* **[3]** in July 1982 was even the very last in the Slovenian part of the Drava River area.


[3]

Great changes (1991–2000)

Soon after Slovenia attained its independence, the production in Croatia was no longer possible. With active agricultural policy, Slovenia thus promoted expansion of sugar beet production and its import from the neighbouring countries. In 1993, TSO invested in technology that enabled raw cane sugar processing. There followed the process of ownership transformation into a joint stock company, and in 1996 the shares of Sugar Factory in Ormož d.d. were already listed on the Ljubljana Stock Exchange. In 1997, a great change in the ownership structure took place, given that the majority stake of TSO d.d. was bought by the Dutch corporation Royal Cosun from Breda. As soon as cooperation between DOPPS - BirdLide Slovenia and TSO was established, several conservation measures began to be implemented for threatened species.

In 1997 and 1998, two breeding rafts (12–14 m^2) were set up in Basin 4 for the Common Tern *Sterna hirundo* in order to provide suitable conditions for its breeding, independently of the water level in the basin. The rafts were made by DOPPS volunteers, with their setting up approved by TSO. On both rafts, up to 65 pairs of terns bred in the 1998–2012 period.



In the 1990s, TSO's sugar production reached few ten thousand tons per year. The peak was reached in 1999, when 64,200 tons of sugar was produced, by which the self-sufficiency rate of 86.2% was achieved.

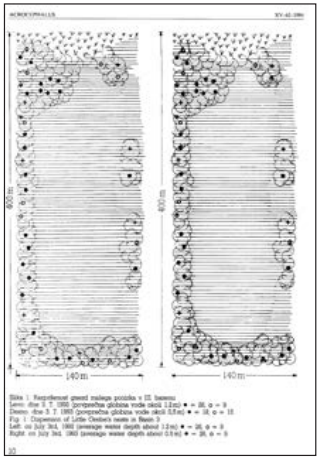

[1]


[2]


[3]


[4]


[5]


[6]

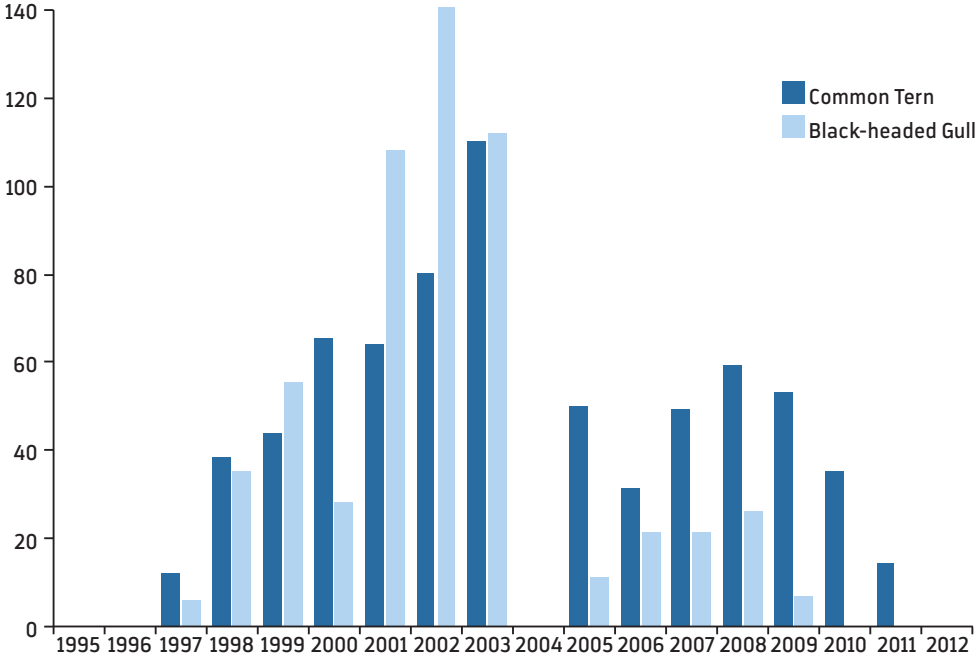
In this period, some new rare and threatened breeding species settled in the Ormož basins: in 1996, first breeding of the Black-winged Stilt *Himantopus himantopus* **[1]** was recorded in the continental part of Slovenia, while a year later a Gadwall *Anas strepera* **[2]**, which had previously not been known as a breeder of Slovenia, began to breed here. Daily maxima of migrating waders reached the peak in September 1996, when 471 Little Stints *Calidris minuta* **[3]**, 52 Curlew Sandpipers *C. ferruginea* and 112 Dunlins *C. alpina* were counted in the mudflats of Basin 6. In 1999, a Pectoral Sandpiper *C. melanotos* **[4]** was observed here for the very first time in Slovenia. The beginning of target research into species of conservation importance was marked in 1992 and 1993 by the census of nests of the Little Grebe *Tachybaptus ruficollis* **[5, 6]**, the breeding density of which reached 4.5–8.0 pairs/ha.

Conservation measures for colony breeders get a new dimension (2001–2005)

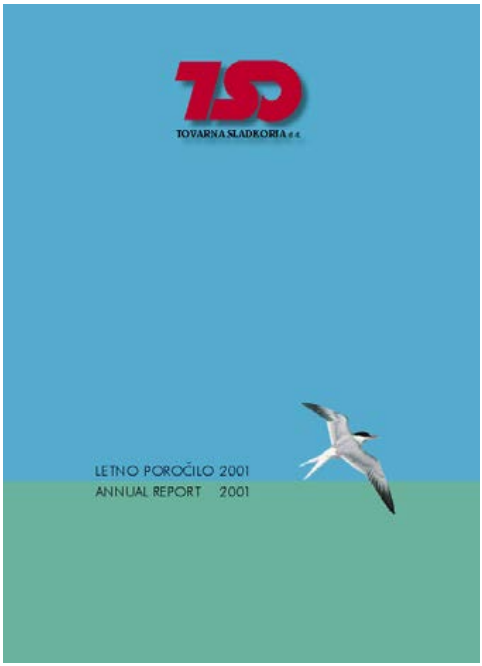
Based on solid results from previous years and owing to the disused old rafts, DOPPS opted in 2001 for a bigger (96 m^2) and modernly designed breeding raft. As soon as set, it became practically the only breeding site of a colony of Common Terns and Black-headed Gulls for a whole decade.


[1]


[2]



Numbers of breeding pairs of Common Tern *Sterna hirundo* **[1]** and Black-headed Gull *Chroicocephalus ridibundus* **[2]** on the breeding rafts in Ormož basins per separate years. The highest numbers bred in 2003, when 110 pairs of Common Tern and 112 pairs of Black-headed Gull were counted on the new raft.



Corporate image of the Annual Report for 2001 shows TSO's commitment to the environmental protection and nature conservation, the symbol of which became Common Tern thanks to the Factory's cooperation with DOPPS.


[3]


[4]


[5]


[6]

In 2001, breeding of the Redshank *Tringa totanus* **[3]** was ascertained in Ormož basins (the species had previously been known to breed in Slovenia only at Lake Cerknica), but as early as in the ensuing year its population rose to 11 pairs. Occasionally, the Black-necked Grebe *Podiceps nigricollis* **[4]** bred there as well, while in 2002 the Pintail *Anas acuta* **[5]** was found to breed there for the first time is Slovenia ever. The area was still a very important stopping place for migrating waders: in March 2003, for example, 451 Ruffs *Calidris pugnax* were seen there, whereas in May of the same year the largest flock of Temminck's Stints *Calidris temminckii* **[6]** ever in Slovenia was recorded (27 individuals).

End of a story (2006–2008)

In 2006, the reform of the common EU agricultural policy hit the sugar sector as well. In this particular year, two Community Council's decrees were issued, which were used as a legal basis for the implementation of the reform of the common market arrangement for the sugar sector. The implications of the new measures were fatal for the Slovenian sugar beet cultivation and sugar production, considering that with the reduced sugar prices and taking into account the taxes these would no longer be profitable after the new EU market decree. At the annual general meeting on 22 June 2006, TSO made a decision to close down the factory, which practically meant the abolition of sugar production in Slovenia and the beginning of the company's restructuring.

Immediately after the decision was made to liquidate the factory, DOPPS embarked, together with TSO, upon activities for the conservation of the wetland and establishment of a nature reserve in the area of the basins. The foundations were laid in the document "The importance and perspectives of the wastewater basins of Sugar Factory in Ormož (TSO d.d.)" (December 2006).


[1]


[2]

The last sugar beet campaign took place in 2006, when 39,000 tons of sugar was produced. As parts of TSO were disassembled in the process of liquidation (including the pipeline and pumps) **[1]**, the basins gradually turned dry and overgrown with vegetation without a regular supply of water **[2]**.


[3]

Despite poor prospects for the future, the first breeding season upon the abandoned sugar production turned out to be very benevolent for certain species: in 2007, no less than 19 Black-winged Stilt *Himantopus himantopus* pairs bred in the Ormož basins, while in Basin 3 a pair of threatened Ferruginous Duck *Aythya nyroca* **[3]** bred for the first time by successfully fledging their young. In the same year, the Redshank *Tringa totanus* bred here for the last time, whereas the majority of other species of conservation importance, including the colony on the raft, persisted here till 2009.

A new chapter (2009–)

After the factory closure, DOPPS and TSO management proposed the Ormož basins area to be converted into a nature reserve. Thus the area of exceptional importance for birds could be saved from unavoidable ruin as well as given a new meaning at the same time. In the TSO restructuring program, the proposal was confirmed by the Government of Slovenia, and after the vision of development of the future reserve was presented, the majority owner fully agreed with the idea. In 2010, the firm Royal Cosun handed the basins over to DOPPS for ownership and management.

Numerous international organizations and individuals from Slovenia and abroad quickly expressed their great support to DOPPS in their efforts to set up a nature reserve in the area of TSO's basins, which happened to be one of the key wetlands in our country for a safe migration route of waterbirds. Upon the transfer of ownership to a NGO with its functioning in the public interest, this act was recognized as exceptional by AEWA, RAMSAR, EURONATUR, Ministry of the Environment and Spatial Planning, National Institute of Biology and even by His Excellency Johannes Douma, the Ambassador of the Kingdom of the Netherlands in Slovenia.

> *Our wish is that in the future the basins area becomes a nature reserve that would provide for permanent protection of the threatened bird species and other fauna. At the same time, such a reserve should also function in the sense of education and example – with a purpose to strengthen the awareness of nature conservation's significance in the wider public. By taking into account the references and our past positive experiences, we intend to hand the ownership of the basins area over to DOPPS - BirdLife Slovenia with all rights and obligations stemming from this ownership. We are firmly convinced that a nature reserve will be set up in this area that will be of great significance not only in a conservational but in a broader social context as well.*
>
> The statement on the purpose and future ownership of TSO wastewater basins, 2 April 2009 (Jurij Dogša, Company Director)

Ceremonial signing of the contract on non-payable transfer of land from TSO to DOPPS on 2 March 2010 at Grand Hotel Union in Ljubljana (from left to right: Rudolf Tekavčič, President of DOPPS; Jurij Dogša, Director of TSO d.d.; Hans Hogeweg, Commercial Director of Suiker Unie, COSUN and Chairman of TSO Supervisory Board). DOPPS was faced with a great commitment to the realization of the reserve's pledged goals.

When Mr Jurij Dogša, TSO Director, informed the Supervisory Board that the destruction of wastewater basins would inevitably mean a true disaster for birds, something very special occurred, something that I had never experienced before: without even asking about the financial consequences, the Board decided – in no more than in few minutes – to hand the land over to DOPPS free of charge. So, it is now my honour to transfer, in the name of TSO stakeholders, these 55 hectares to Slovenia, its people and birds via DOPPS - Birdlife Slovenia.

Hans Hogeweg

Commercial Director of Suiker Unie (NL) and
Chairman of TSO Supervisory Board

The longstanding excellent cooperation between TSO and DOPPS is a proof that the latter had developed a strong and clear public image both at home and abroad, backed by professional personnel and committed mass membership. The non-payable transfer of such a large area, demonstrates understanding of the solidity, seriousness and reliability of the functioning of DOPPS. If this was not so, I am convinced that the area would end in other hands with conflicting interests.

Mladen Berginc

Head of Nature Conservation Department, Ministry of the Environment and Spatial Planning

In the area of the Ormož basins, conditions for the founding of the third reserve managed by DOPPS were established, the other two being the Škocjanski zatok Nature Reserve near Koper and the Iški morost Nature Reserve at Ljubljansko barje. The dedication, experiences and results of the ten-year work in other areas are good prospects for the future.

It is truly unique that a commercial company donates part of its property – and in this case we are dealing with a large area – to an NGO.

Bert Lenten

Executive Secretary of AEWA, African-Eurasian Migratory Waterbird Agreement

We believe that this fruitful cooperation and complementarity that developed between industrial sector and nature conservation can provide an inspiring example for similar situations in other countries as well.

Tobias Salathé

Senior Advisor for Europe, Ramsar Wetlands Secretariat

Po Sloveniji — četrtek, 4. marca 2010 — 17

MARIBOR - OKOLICA — Maribor — **Zlato tudi dijakoma II. gimnazije** — Stran 20

CELJSKO — Celje — **Kljub številnim pripombam rebalans proračuna sprejet** — Stran 21

PREKMURJE - PRLEKIJA — Murska Sobota — **Pomursko čebelarstvo vredno od 10 do 15 milijonov evrov** — Stran 23

V Ormožu naravni rezervat za ptice

Lastniki Tovarne sladkorja Ormož v likvidaciji so na Društvo za opazovanje in proučevanje ptic v Sloveniji neodplačno prenesli 55 hektarjev zemljišč tovarne

MIHA ŠOŠTARIČ

Društvo za opazovanje in proučevanje ptic Slovenije (DOPPS) je postalo lastnik 55 hektarjev zemljišč Tovarne sladkorja Ormož (TSO) v likvidaciji. Nizozemsko podjetje Royal Cosun, ki je lastnik TSO, se je odločilo za neodplačni prenos zemljišč, na katerih se nahajo bazeni za odpadne vode. Gre za območje, ki je že vrsto let žarišče ornitološke biodiverzitete v Sloveniji.

"Zaposleni v TSO in ornitologi že od leta 1979 sodelujemo z namenom varstva ptic in narave. Tudi ob prevzemu TSO s strani Nizozemcev smo uspeli na 55 hektarjev velikem območju bazenov TSO za odpadne vode, ki so v funkciji čistilne naprave, še naprej zagotavljati izredne pogoje za gnezdenje močno ogroženim vrstam ptic v Sloveniji in Evropi," je o velikem darilu slovenskim ornitologom povedal podpredsednik DOPPS **Damijan Denac.**

Po reformi sladkornega sektorja v Evropski uniji in sprejeti odločitvi o zaprtju TSO je po besedah Denaca obstoj bazenov in njihove veličastne narave za hip obvisel na nitki. "A ne v resnici, saj je bila ponovno naša skupna želja in vizija, da območje bazenov ohranimo kot naravni rezervat z naravovarstveno, izobraževalni in raziskovalno vlogo. Veliko delo je pri tem opravil direktor TSO **Jurij Dogša,** ki je lastnikom tovarne predstavil naše načrte. In z veseljem moram poudariti, da so se Nizozemci odločili za plemenito dejanje, ki presega nacionalne, tržne in osebne interese," je nadaljeval Denac.

V imenu lastnikov je Dogša že lansko leto DOPPS obvestil, da se zavedajo, da so s prekinitvijo proizvodnje sladkorja prenehali tudi procesi v bazenih, ki so bili pomembni za varstvo ptic in "da je treba vzpostaviti nov način upravljanja z območjem, da se ohrani njegova pestrost pomembna v nacionalnem in mednarodnem merilu". Že v preteklosti so na območju bazenov TSO postavili gnezditvene splave, zagotovili pa so tudi naravovarstveno upravljanje z gladinami v bazenih ter naravovarstveno košnjo. "S skupnimi močmi smo omogočili gnezdenje več močno ogroženim vrstam ptic v Sloveniji in Evropi, ustvarili optimalne pogoje za tisoče vodnih ptic, ki so tukaj na selitvi nabirale novih moči, in tako dokazali, kako pomembno in uspešno je lahko sodelovanje med varstvom narave in industrijo," je poudaril Denac ter izrazil prepričanje, da bodo odlično sodelovati tudi z ormoškim občinskim vodstvom. Ornitologi so prepričani, da bo naravni rezervat za ptice tudi odličen produkt za ormoško občino, saj bodo v prihodnje na tem območju pripravljali razne seminarje, povezane z rezervatom, ki bo odprt za javnost, in zato pričakujejo množičen obisk.

V ormoškem naravnem rezervatu že sedaj gnezdi 29 vodnih vrst ptic, od tega je šest vrst takšnih, ki v Sloveniji gnezdijo le v Ormožu, za dvanajst vrst pa je ormoško območje najpomembnejše gnezdišče v Sloveniji. Na tem območju, ki je odslej v lasti DOPPS, se lahko dnevno ustavi tudi do 10.000 ptic.

Naravni rezervat za ptice (Damijan Denac)

The handing of former industrial basins over to a non-governmental nature conservation organization echoed in mass media at home and abroad (above: article from the Večer daily; right: news entitled "A treat for nature conservation!" in the journal Euronatur of the foundation carrying the same name with its seat at Radolfzell, Germany).

Ein Zuckerl für den Naturschutz!

Der 2. März war ein großer Tag für den Naturschutz in Slowenien: Zum ersten Mal in der Geschichte des Landes wurden einer Naturschutzorganisation Flächen übertragen – eine Aktion, die bis vor Kurzem per Gesetz noch gar nicht möglich gewesen wäre. Nachdem ihre Fabrik infolge der EU-Zuckerreform geschlossen werden musste, übergab die Firma Royal Cosun die Klärteiche der Zuckerfabrik direkt am Ormozstausee an der Drau im März offiziell an DOPPS BirdLife Slowenien. Dieser Schritt bildete den krönenden Abschluss einer vorbildlichen, 20 Jahre dauernden Zusammenarbeit zwischen Industrie und Vogelschutz. Eine 55 Hektar große Fläche aus Teichen und Grünland nahe der kroatischen Grenze wurde durch vogelfreundliche Mahd, Wasserstandsregelung und den Bau von Nistplattformen mit der Zeit zu einem artenreichen Lebensraum an der hier gestauten Drau. Heute sind die Teiche Teil des europäischen Netzwerks Natura 2000.

Zahlreiche Wasservogelarten wie Schwarzhalstaucher, Löffel-, Schnatter-, Krick-, Moor- und Kolbenente sowie Weißbart- und Trauerseeschwalbe brüten in ganz Slowenien nur noch hier. Zudem ist mit den Klärteichen ein wichtiger Trittstein für Zugvögel gesichert, die auf der Adria-Zugroute zwischen ihren Winter- und Sommerquartieren hin- und herpendeln. Tausende Wasservögel machen regelmäßig an den Klärteichen von Ormoz Rast, um neue Energie für den Weiterflug zu tanken. Dank der vorbildlichen Geste der Fabrikinhaber kann dieser wertvolle Lebensraum auch weiterhin erhalten werden. Ein Vogel-Beobachtungsturm und eine ausführliche Informationstafel helfen bereits, den besonderen Wert des Gebietes einem breiten Publikum zu vermitteln. „Jetzt müssen wir dafür sorgen, den Wasserstand in den Teichen wieder zu erhöhen und durch extensive Beweidung mit Wasserbüffeln verhindern, dass die Teiche zuwachsen. Dies werden die beiden wichtigsten Aufgaben für die nächsten zwei Jahre sein", sagt EuroNatur- und DOPPS-Mitarbeiter Borut Stumberger (mehr im Interview auf den Seiten 8 - 11).

Kurz gemeldet — euronatur 2/2010

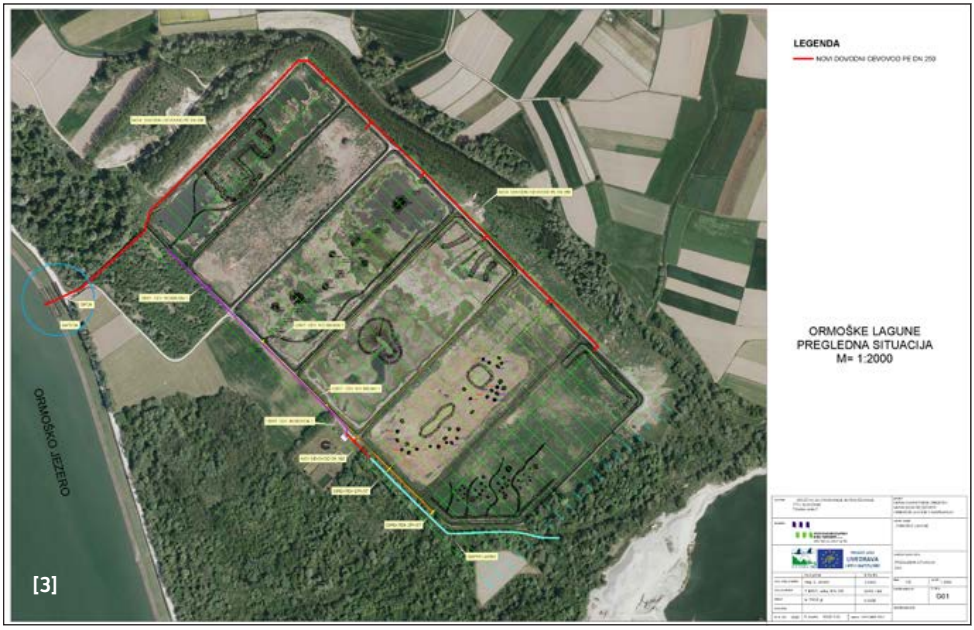
The basins burst to life again (2012–2015)

The possibility for a renewed revival of the former TSO basins through restoration of wetland habitats and implementation of the future reserve's goals became feasible within the project "LIVEDRAVA – Riparian Ecosystem Restoration of the Lower Drava River in Slovenia (LIFE11 NAT/SI/882)", supported by the EU financial mechanism LIFE+. The numerous activities of the project, coordinated and implemented by DOPPS together with its partners in the area of the Drava River between Maribor and Središče ob Dravi, include designation of the Ormož Basins Nature Reserve (NROL) and establishment of visitor infrastructure.


[1]


[2]

The prerequisite for the functioning of Ormož Basins as a semi-natural wetland is a constant supply of water. In this case it is channelled from the nearby Lake Ormož through the siphon **[1]** and inlet piping system **[2]** built within the LIVEDRAVA project.




[4]


[5]

The islets surrounded by deeper water enable safe nesting and resting for the waterbird species of conservation importance. In the basins, tens of islets of different sizes were built, by which the diversity of habitats and nest sites was increased **[3, 4]**. Before various earth works were carried out, willows and other vegetation with which the basins were overgrown in the waterless years, had to be removed. In the years prior to the project, this was done voluntarily by DOPPS and their own means **[5]**


[6]


[7]

Conservation of the Nature Reserve's exceptional biodiversity is not possible without its active management. The best known natural method of sustaining low vegetation in the open areas is grazing. For this purpose, all the necessary infrastructure, including fence **[6]** and stable for grazing animals **[7]**, had to be built.


[8]


[9]

[10]


[12]


[11]

The former wastewater treatment engine room **[8]** has been transformed into a project office with a smallish exhibition room or auditorium, where we have hosted numerous guests from Slovenia and abroad, including school children and students **[9]**, and acquainted them with the Ormož Basins and our efforts to restore them. A special tactile model of the area is available to the blind and visually impaired **[10]**. The surroundings of the facility were reconstructed into the "Nature reserve's Garden" **[11]**, where sustainable arrangement of domestic garden and conservation measures are displayed (e.g. nest boxes for birds and bats) **[12]**.

One of the reserve's basic functions is education. With its new educational trail it offers a possibility of relaxed, top-quality educative experiencing of nature to all people in the ways that do not disturb the animals and other visitors, who are free to enter special observation hides.

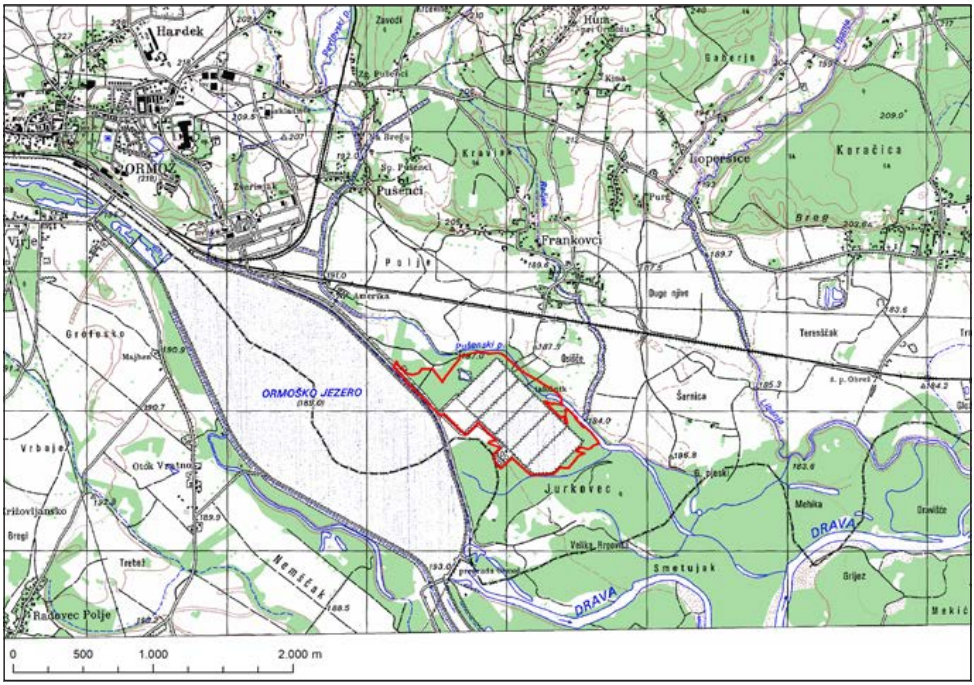
[13]

[14]

Integration of the public and local entrepreneurs: at the beginning of the project, DOPPS and Ormož Municipality presented to the public the purpose of the LIVEDRAVA project and the objectives of the future development of Ormož Lagoons **[13]**. The contractors taking part in the setting up facilities for visitors as well as grazing infrastructure were various entrepreneurs from the Podravje region **[14]**.

Area description

Ormož Basins Nature Reserve (46°23' N, 16°11' E) is situated in NE Slovenia in the immediate vicinity of the Drava River. It spreads on the floodplain of Središko polje, below the foot of the Early Pleistocene river terrace, on which the town of Ormož was developed immediately along the border with Croatia. Administratively, it belongs to the Ormož Municipality in the Podravje statistical region.



The area of Ormož Basins is surrounded from all sides by remains of floodplain forest as well as by few poplar plantations and fields. Along its northern edge runs the Pušenski potok (stream), which separates the area from the fairly extensive complex of intensively cultivated farmland. The nearest inhabited places are the hamlet of Amerika (Pušenci) and the village of Frankovci. There is the railway line Ormož-Središče ob Dravi running nearby. In the south, the area borders on two water bodies of artificial origin, the Lake Ormož Reservoir (HPP Varaždin facility) and the still functioning flooded gravel pit Jurkovec (DTK 1 : 25,000 © Surveying and Mapping Authority of the Republic of Slovenia).

Aerial view of the Ormož Basins in the summer.

The area of Ormož Basins is composed of the following units: (1) six former TSO wastewater basins with intermediate dikes (35.4 ha), (2) filled up former saturation basin (2.9 ha), (3) area of the former service station and TSO wastewater treatment plant, now converted into the Nature reserve's garden (0.9 ha), (4) former area for depositing materials (after the renovation mostly converted into grassland) (6.6 ha), (5) farmland (predominantly arable fields) (4.79 ha), (6) poplar plantations in the vicinity of basins (5.1 ha), (7) complex of dense floodplain forest (6.4 ha), (8) small softwood forest stands in the vicinity of basins (2.5 ha), (9) backwater and few km of roads.

BIRDS

Number of species and groups of birds

In the wider area of Ormož Basins (including Lake Ormož, surrounding forests and farmland), ornithologists recorded 266 bird species by the end of 2016, or 69% of all species registered in Slovenia till then (388). Within the reserve, 220 species with the following status were identified in the same period: 85 bred here regularly or occasionally, 28 were breeders of the area's surroundings, while 107 were species recorded during the winter or migration. These birds belong to 52 families, which incorporate related species with certain unique characteristics. Among the best represented are the families with predominant species of wetland habitats, particularly waterfowl Anatidae, herons Ardeidae and representatives of six families known under their common name of shorebirds Charadriiformes.

Table:

Families of birds and appertaining number of species in the area of Ormož Basins Nature Reserve.

The numbers of all recorded species, breeders (with additional number of breeders of the area's surroundings in brackets), and regularly occurring species are stated herewith. A comparison between Slovenia and the World (number of all known species) is also given. The most characteristic and otherwise interesting families are presented on pages 36–38. Note: Separation into families and inclusion of species into them has been taken from the latest literature and may differ from older sources.

FAMILY		NUMBER OF SPECIES				
English name	Scientific name	Total	Breeders	Regular	Slovenia	World
Pheasants & Allies	Phasianidae	3	1 (2)	1	8	187
Waterfowl	Anatidae	18	10	12	38	165
Grebes	Podicipedidae	4	2	2	5	20
Doves & Pigeons	Columbidae	5	3 (2)	3	5	351
Swifts	Apodidae	1	0	1	3	96
Cuckoos	Cuculidae	1	1	1	2	149
Rails & Coots	Rallidae	5	5	5	7	131
Cranes	Gruidae	1	0	1	1	15
Thick-knees	Burhinidae	1	0	0	1	10
Oystercatchers	Haematopodidae	1	0	0	1	9
Avocets & Stilts	Recurvirostridae	2	1	2	2	7
Plovers	Charadriidae	6	2	3	9	71
Sandpipers	Scolopacidae	25	1	15	29	91
Gulls, Terns & Skimmers	Laridae	13	3	4	23	101
Storks	Ciconiidae	2	0 (2)	2	2	20
Cormorants	Phalacrocoracidae	2	0	0	3	34
Ibises & Spoonbills	Threskiornithidae	2	0	0	3	35
Herons	Ardeaidae	8	1	6	9	64
Osprey	Pandionidae	1	0	0	1	1
Hawks	Accipitridae	12	4 (2)	9	24	248
Owls	Strigidae	2	1 (1)	1	10	220
Hoopoes	Upupidae	1	0 (1)	1	1	2
Bee-eaters	Meropidae	1	0 (1)	0	1	31
Kingfishers	Alcedinidae	1	1	1	1	120
Woodpeckers	Picidae	7	6 (1)	7	10	254
Falcons & Caracaras	Falconidae	6	0 (3)	4	9	64
Old World Orioles	Oriolidae	1	1	1	1	32
Shrikes	Laniidae	2	1	2	4	31
Crows & Jays	Corvidae	7	2 (1)	5	10	123
Tits & Chickadees	Paridae	4	3 (1)	3	7	57
Penduline-tits	Remizidae	1	1	1	1	11
Larks	Alaudidae	2	0 (2)	2	6	95
Bearded Reedling	Panuridae	1	0	1	1	1
Reed Warblers & Allies	Acrocephalidae	6	4 (1)	6	12	53
Grassbirds & Allies	Locustellidae	3	2	3	3	57
Swallows & Martins	Hirundinidae	3	1 (2)	3	5	83
Leaf Warblers	Phylloscopidae	4	1 (1)	3	7	70
Bush Warblers	Scotocercidae	1	0	0	1	36
Long-tailed Tits	Aegithalidae	1	1	1	1	13
Sylviid Warblers & Parrotbills	Sylvidae	5	3	5	8	65
Treecreepers	Certhiidae	2	2	2	2	9
Nuthatches & Allies	Sittidae	1	1	1	2	30
Wrens	Troglodytidae	1	1	1	1	85
Starlings & Mynas	Sturnidae	1	1	1	2	115
Thrushes	Turdidae	5	2 (1)	5	7	153
Old World Flycatchers & Chats	Muscicapidae	13	6 (1)	10	19	298
Kinglets	Regulidae	1	0	1	2	6
Accentors	Prunellidae	1	0	1	2	13
Old World Sparrows	Passeridae	2	1 (1)	2	6	41
Pipits & Wagtails	Motacillidae	8	2 (1)	6	10	67
Finches & Allies	Fringillidae	10	5 (1)	10	18	201
Old World Buntings	Emberizidae	3	2	2	10	42

Waterfowl [1]

They include ducks, geese and swans (among others); distributed all over the world. Of all aquatic birds, they inhabit the widest spectre of wetlands. The bill is wide and flattened, usually with lamellae, neck long, head small. Palmate foot, with three webbed toes. In many of them (ducks) pronounced sexual dimorphism. Mostly monogamous, pairs of some of them stay together for life (e.g. swans).

Grebes [2]

Predominantly fish-eating birds, distributed in continental wetlands all over the world. Well adapted to life in water, with robust lobed feet and toes surrounded with lobes of skin. Bill pointed, wings short and narrow, no tail. Monogamous, many of them characterized by their complex mating rituals.

Rails & Coots [3]

They inhabit different habitat types worldwide; our species are largely confined to wetlands. With the exception of coots, they are known for their hidden way of life, spending most time in thick vegetation. Toes are usually very long; lobed in coots. Omnivorous, some representatives almost exclusively herbivorous. Recent extinction documented for at least 26 species, mostly island endemics incapable of flight.

Sandpipers [4]

They nest predominantly in open wetlands, from grasslands to coastal salt marshes. Numerous species breed in Arctic tundra, but spend only the short summer there, while the greater part of their life cycle is spent in temperate and tropical belts. This group includes curlews, godwits, stints, woodcocks, snipes and sandpipers. The bill is thin, and the same as legs in numerous species long, some of them with partially webbed toes. This group is characterised by great diversity in their feeding niches and breeding strategies.

Gulls, Terns & Skimmers [5]

Globally one of the most widely distributed groups of birds, inhabiting all continents, offshore islands and oceans; this group includes gulls and terns (amongst others). White, black and grey shades of feathers predominate in these birds. Wings are long and pointed. Many gulls are omnivorous, while terns are mostly fish-eaters, or feed on water organisms they catch by plunge-diving into the water. They breed in colonies numbering from a few to several ten thousand pairs.


[1]


[2]


[3]


[4]


[5]

Herons [6]

Medium to large sized birds with long legs and toes; they live on or in the vicinity of water bodies, feeding on different water and land animals, which they grab or stab with their powerful straight bills. During flight, neck is folded and, the same as legs, long; tail is short. During the breeding season, many species acquire short ornamental feathers on their heads and backs: their powder down feathers are characteristic as well. The majority of species breed colonially in trees or bushes above the water.

Hawks [7]

Most numerous group of raptors, inhabiting practically all land habitats. They include birds of prey with the exception of falcons and Osprey. The bill is short and sharply hooked, intended for tearing prey or dead animals. Wings are broad and rounded, eyes directed forward, legs medium long, strong, with long and hooked claws for killing the prey. The sexes are mostly equally coloured; females are larger than males. These birds are monogamous, with the same pair often using nest for a number of years.

Woodpeckers [8]

They inhabit all continents except Australia. This group includes woodpeckers and wrynecks (among others). Feathers well patterned, with prevailing black, white and red colours. Head big, with enforced skull, neck thick. Bill chisel-shaped and strong, adapted for excavating, tongue long, narrow and retractable. Legs short, adapted for climbing, with long, distinctly curved claws. Tail stiff, offering support during climbing. Monogamous, with the majority of these birds excavating their own nesting holes.

Shrikes [9]

Although they reach their greatest diversity in the Old World, only six species of these small to medium sized birds can be found in Europe. They are characteristic birds of open habitats, where individual trees or bushes are utilised as perches by them. Most of these birds have black facial mask and black-and-white, medium to very long tail feathers. The bill is hooked. They feed on insects and small vertebrates. Some species impale their prey on thorns.

Bearded Reedling [10]

This group comprises a single species on a global scale. From the aspect of relationship with other birds, our species is the most unusual one. In the past, it was classified into different families – tits, warblers and babblers. It is a small bird, with short wings and long tail, and short pointed bill. During breeding as well as outside this period, it is confined to reeds. First breeding of the species in Slovenia was recorded in Ormož Basins in 2017.


[6]


[7]


[8]


[9]


[10]

Waterbirds – an overview

Among the birds recorded in the area of the reserve, 103 are wetland species (waterbirds*), 62 of which occur regularly (± each year), while 41 are very rare or accidental visitors. Owing to the exceptional significance of this area for them, this ecological group of birds is in the forefront of the conservation efforts of the Ormož Basins Nature Reserve.

Table:

List of all waterbird species (103 species) observed till the end of 2016 in the area of Ormož Basins Nature Reserve (NROL).

The occurrence frequency:
VC – very common, recorded in › 50% of observation days;
C – common, recorded in 25–50% of all observation days;
F – frequent, recorded in 10–25% of all observation days;
R – rare, recorded in 5–10% of all observation days;
! – very rare visitor with less than 10 records after 2000;
!! – accidental visitor with less than 5 known records.

Abundance of regularly occurring species in the period of more frequent occurrence:
1 – singly (1–2 individuals);
2 – small numbers (3–10 ind.);
3 – numerous (11–100 ind.);
4 – › 100 individuals.

Status:
R – regular, occasional or former NROL breeder;
SU – breeder of the reserve's surroundings;
N – nonbreeder.

* Here, some representatives of passerines, which inhabit exclusively wetlands in the breeding season at least, have been included in the group of waterbirds. Otherwise, the most frequently used definition specifies as waterbirds only the following families (listed herewith are only those recorded in Slovenia): Gaviidae, Podicipedidae, Pelecanidae, Phalacrocoracidae, Ardeidae, Ciconiidae, Threskiornithidae, Phoenicopteridae, Anatidae, Gruidae, Rallidae, Haematopodidae, Recurvirostridae, Burhinidae, Glareolidae, Charadriidae, Scolopacidae and Laridae.

English name	Scientific name	Occurance frequency	Abundance	Status
Mute Swan	*Cygnus olor*	VC	2	R
Bean Goose	*Anser fabalis*	!		N
White-fronted Goose	*Anser albifrons*	!		N
Greylag Goose	*Anser anser*	!		N
Ruddy Shelduck	*Tadorna ferruginea*	!!		N
Common Shelduck	*Tadorna tadorna*	F	2	N
Wigeon	*Anas penelope*	C	3	N
Gadwall	*Anas strepera*	VC	3	R
Teal	*Anas crecca*	VC	4	R
Mallard	*Anas platyrhynchos*	VC	4	R
Pintail	*Anas acuta*	F	2	R
Garganey	*Anas querquedula*	VC	4	R
Shoveler	*Anas clypeata*	C	3	R
Red-crested Pochard	*Netta rufina*	!		N
Pochard	*Aythya ferina*	C	3	R
Ferruginous Duck	*Aythya nyroca*	C	2	R
Tufted Duck	*Aythya fuligula*	C	2	R
Goldeneye	*Bucephala clangula*	!!		N
Cormorant	*Phalacrocorax carbo*	!!		N
Pygmy Cormorant	*Phalacrocorax pygmeus*	!		N
Bittern	*Botaurus stellaris*	!		N
Little Bittern	*Ixobrychus minutus*	R	1	R
Night Heron	*Nycticorax nycticorax*	R	2	N
Squacco Heron	*Ardeola ralloides*	!		N
Little Egret	*Egretta garzetta*	F	2	N
Great Egret	*Ardea alba*	VC	3	N
Grey Heron	*Ardea cinerea*	VC	3	N
Purple Heron	*Ardea purpurea*	F	2	N
Black Stork	*Ciconia nigra*	R	2	SU
White Stork	*Ciconia ciconia*	R	2	SU
Glossy Ibis	*Plegadis falcinellus*	!!		N
Eurasian Spoonbill	*Platalea leucorodia*	!		N
Little Grebe	*Tachybaptus ruficollis*	VC	4	R
Great Crested Grebe	*Podiceps cristatus*	!!		N
Red-necked Grebe	*Podiceps grisegena*	!		N
Black-necked Grebe	*Podiceps nigricollis*	F	2	R
White-tailed Eagle	*Haliaeetus albicilla*	C	1	SU
Marsh Harrier	*Circus aeruginosus*	C	1	R
Osprey	*Pandion haliaetus*	!		N
Water Rail	*Rallus aquaticus*	VC	2	R
Spotted Crake	*Porzana porzana*	R	1	R
Little Crake	*Zapornia parva*	R	2	R
Moorhen	*Gallinula chloropus*	VC	3	R
Coot	*Fulica atra*	VC	4	R

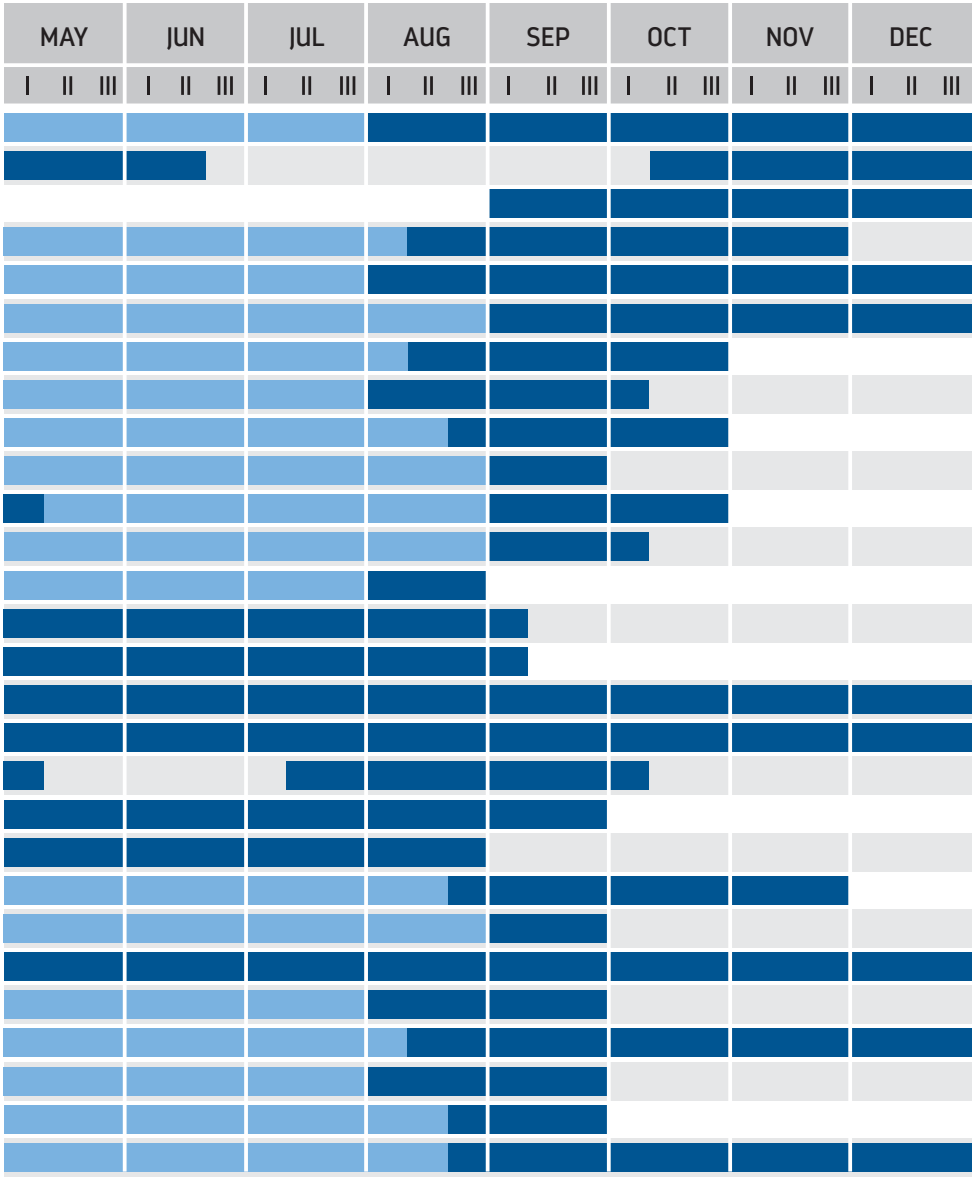
English name	Scientific name	Occurance frequency	Abundance	Status
Crane	*Grus grus*	R	3	N
Oystercatcher	*Haematopus ostralegus*	!!		N
Black-winged Stilt	*Himantopus himantopus*	C	2	R
Avocet	*Recurvirostra avosetta*	R	2	N
Stone-curlew	*Burhinus oedicnemus*	!!		N
Little Ringed Plover	*Charadrius dubius*	C	3	R
Ringed Plover	*Charadrius hiaticula*	R	2	N
Kentish Plover	*Charadrius alexandrinus*	!!		N
Golden Plover	*Pluvialis apricaria*	!!		N
Grey Plover	*Pluvialis squatarola*	!		N
Lapwing	*Vanellus vanellus*	VC	4	R
Red Knot	*Calidris canutus*	!		N
Sanderling	*Calidris alba*	!!		N
Little Stint	*Calidris minuta*	F	3	N
Temminck's Stint	*Calidris temminckii*	F	2	N
Pectoral Sandpiper	*Calidris melanotos*	!!		N
Curlew Sandpiper	*Calidris ferruginea*	F	2	N
Dunlin	*Calidris alpina*	C	3	N
Broad-billed Sandpiper	*Calidris falcinellus*	!		N
Ruff	*Calidris pugnax*	C	4	N
Jack Snipe	*Lymnocryptes minimus*	!		N
Snipe	*Gallinago gallinago*	VC	3	N
Great Snipe	*Gallinago media*	!!		N
Woodcock	*Scolopax rusticola*	!		N
Black-tailed Godwit	*Limosa limosa*	R	2	N
Bar-tailed Godwit	*Limosa lapponica*	!!		N
Whimbrel	*Numenius phaeopus*	!		N
Curlew	*Numenius arquata*	R	2	N
Common Sandpiper	*Actitis hypoleucos*	C	2	N
Green Sandpiper	*Tringa ochropus*	VC	3	N
Spotted Redshank	*Tringa erythropus*	C	2	N
Greenshank	*Tringa nebularia*	C	3	N
Marsh Sandpiper	*Tringa stagnatilis*	F	2	N
Wood Sandpiper	*Tringa glareola*	VC	4	N
Redshank	*Tringa totanus*	C	2	R
Red-necked Phalarope	*Phalaropus lobatus*	!		N
Slender-billed Gull	*Chroicocephalus genei*	!!		N
Black-headed Gull	*Chroicocephalus ridibundus*	VC	4	R
Little Gull	*Hydrocoloeus minutus*	!		N
Mediterranean Gull	*Larus melanocephalus*	!		N
Pallas's Gull	*Larus ichthyaetus*	!!		N
Common Gull	*Larus canus*	!		N
Yellow-legged Gull	*Larus michahellis*	!		N
Little Tern	*Sternula albifrons*	!!		R

English name	Scientific name	Occurance frequency	Abundance	Status
Gull-billed Tern	*Gelochelidon nilotica*	!!		N
Whiskered Tern	*Chlidonias hybrida*	R	2	N
Black Tern	*Chlidonias niger*	R	2	N
White-winged Tern	*Chlidonias leucopterus*	!!		N
Common Tern	*Sterna hirundo*	C	3	R
Kingfisher	*Alcedo atthis*	C	1	R
Bearded Reedling	*Panurus biarmicus*	C	2	N
Cetti's Warbler	*Cettia cetti*	!!		N
Savi's Warbler	*Locustella luscinioides*	C	2	R
Moustached Warbler	*Acrocephalus melanopogon*	R	1	N
Sedge Warbler	*Acrocephalus schoenobaenus*	C	3	R
Reed Warbler	*Acrocephalus scirpaceus*	C	1	R
Great Reed Warbler	*Acrocephalus arundinaceus*	C	2	R
Bluethroat	*Luscinia svecica*	!		N
Reed Bunting	*Emberiza schoeniclus*	VC	3	R

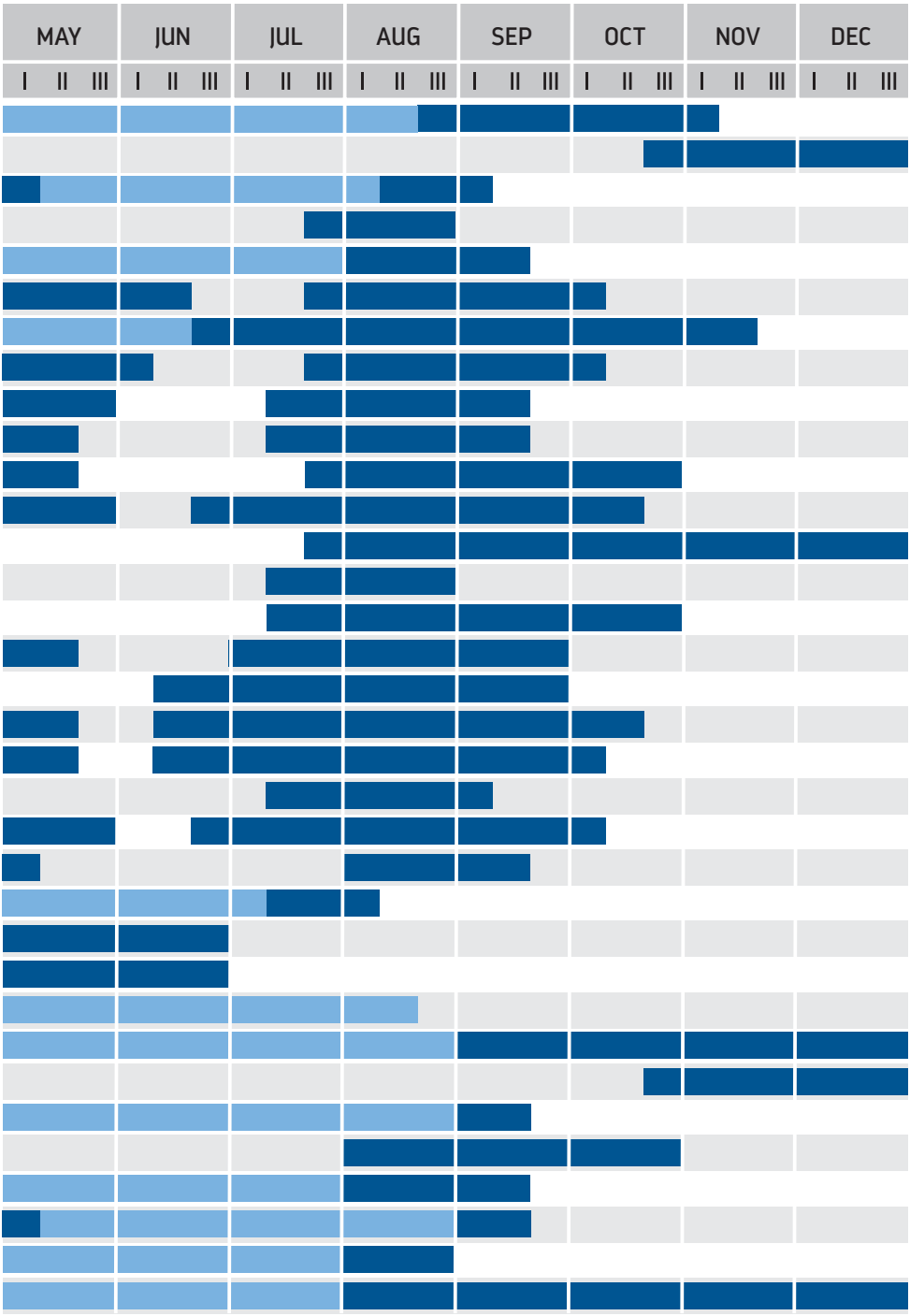
Table:

The periods of waterbird occurrence in the area of Ormož Basins in the calendar year.
Light blue sections illustrate the breeding period for species that breed in the area of NROL or have bred there in the past, with resumed nesting expected there after the area's final restoration of the desired status. Regularly occurring species are included, without very rare and accidental visitors (62 species).

English name	Scientific name	JAN			FEB			MAR			APR		
		I	II	III	I	II	III	I	II	III	I	II	III
Mute Swan	*Cygnus olor*												
Common Shelduck	*Tadorna tadorna*												
Wigeon	*Anas penelope*												
Gadwall	*Anas strepera*												
Teal	*Anas crecca*												
Mallard	*Anas platyrhynchos*												
Pintail	*Anas acuta*												
Garganey	*Anas querquedula*												
Shoveler	*Anas clypeata*												
Pochard	*Aythya ferina*												
Ferruginous Duck	*Aythya nyroca*												
Tufted Duck	*Aythya fuligula*												
Little Bittern	*Ixobrychus minutus*												
Night Heron	*Nycticorax nycticorax*												
Little Egret	*Egretta garzetta*												
Great Egret	*Ardea alba*												
Grey Heron	*Ardea cinerea*												
Purple Heron	*Ardea purpurea*												
Black Stork	*Ciconia nigra*												
White Stork	*Ciconia ciconia*												
Little Grebe	*Tachybaptus ruficollis*												
Black-necked Grebe	*Podiceps nigricollis*												
White-tailed Eagle	*Haliaeetus albicilla*												
Marsh Harrier	*Circus aeruginosus*												
Water Rail	*Rallus aquaticus*												
Spotted Crake	*Porzana porzana*												
Little Crake	*Zapornia parva*												
Moorhen	*Gallinula chloropus*												


MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
I II III

English name	Scientific name	JAN			FEB			MAR			APR		
		I	II	III	I	II	III	I	II	III	I	II	III
Coot	*Fulica atra*												
Crane	*Grus grus*												
Black-winged Stilt	*Himantopus himantopus*												
Avocet	*Recurvirostra avosetta*												
Little Ringed Plover	*Charadrius dubius*												
Ringed Plover	*Charadrius hiaticula*												
Lapwing	*Vanellus vanellus*												
Little Stint	*Calidris minuta*												
Temminck's Stint	*Calidris temminckii*												
Curlew Sandpiper	*Calidris ferruginea*												
Dunlin	*Calidris alpina*												
Ruff	*Calidris pugnax*												
Snipe	*Gallinago gallinago*												
Black-tailed Godwit	*Limosa limosa*												
Curlew	*Numenius arquata*												
Common Sandpiper	*Actitis hypoleucos*												
Green Sandpiper	*Tringa ochropus*												
Spotted Redshank	*Tringa erythropus*												
Greenshank	*Tringa nebularia*												
Marsh Sandpiper	*Tringa stagnatilis*												
Wood Sandpiper	*Tringa glareola*												
Redshank	*Tringa totanus*												
Black-headed Gull	*Chroicocephalus ridibundus*												
Whiskered Tern	*Chlidonias hybrida*												
Black Tern	*Chlidonias niger*												
Common Tern	*Sterna hirundo*												
Kingfisher	*Alcedo atthis*												
Bearded Reedling	*Panurus biarmicus*												
Savi's Warbler	*Locustella luscinioides*												
Moustached Warbler	*Acrocephalus melanopogon*												
Sedge Warbler	*Acrocephalus schoenobaenus*												
Reed Warbler	*Acrocephalus scirpaceus*												
Great Reed Warbler	*Acrocephalus arundinaceus*												
Reed Bunting	*Emberiza schoeniclus*												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Breeding birds – general

A good third of all registered bird species in the Ormož Basins complete here the entire reproduction cycle, from establishing the breeding territory, nest building, egg laying and incubation to the care of the young and attainment of their independence. Most nature reserve breeders inhabit forests and dense shrubs (37); among these, common and generally distributed species prevail. The number of breeders of wetland habitats (waterbirds) is indeed somewhat smaller (31), but this group embraces most of the rare, threatened or in other ways important species of conservation concern. Grasslands, overgrown areas, basin dikes and buildings are used for nesting by the birds, characteristic of agricultural landscape (17 species). Food is searched for in the reserve also by breeders of the reserve's surroundings.


[1]


[3]


[2]

The commonest breeder in the Ormož Basins is the Blackcap *Sylvia atricapilla*, which densely inhabits all types of forests with a well-developed layer of undergrowth and thickets. In 2013, 112 breeding pairs were inventoried here (figure **[1]** depicts distribution of the breeding territories obtained through territory mapping; light green - forests, dark green – scrubs). This 14 cm long and ca. 20 g heavy bird **[2]** feeds on insects and spiders, as well as on various fruits during the summer (e.g. black elderberry). It usually builds its nest low above the ground in a safe shelter of blackberries, nettles and similar plants, or in low bushes and trees **[3]**.


[4]


[5]

The areas where the prevalent herbaceous vegetation is sustained through management are breeding habitats of the Marsh Warbler *Acrocephalus palustris* **[4]**. Its highest density is reached on the edges and dry parts of the basins (in 2013 = 34 territories; brown: grasslands or herbaceous plant stands without or with little woody vegetation **[5]**). It skilfully attaches the nest to several neighbouring stems in thick stands of tall herbs. The characteristic singing of this inconspicuously coloured species mostly consists of mimicry of other birds. It belongs to the species that return to Slovenia very late (beginning of May) from their wintering quarters in sub-Saharan Africa.


[6]


[7]

Coot *Fulica atra* is a characteristic breeder of standing and nutrient-rich water bodies with emergent aquatic plants. In Europe, including Slovenia, it is one of the most widespread waterbirds. In the area of the Ormož Basins it breeds in basins with deeper water and extensive flooded reed and bulrush stands. Coots build their nests on water from water plants **[6]**, which they often use to construct a kind of roof above the cup. Chicks are characteristically coloured subprecocials, which are accompanied and fed by both parents for a few weeks after their hatching **[7]**. Immediately after nesting (July–), initially adult individuals and eventually fledged young begin to gather in flocks in the moulting area.


[8]


[9]

Barn Swallow *Hirundo rustica* **[8]** inhabits open landscape, where it breeds exclusively on buildings and other facilities, but avoids city centres. Most often it selects active barns with domestic animals, particularly cattle. It feeds on small insects it catches in flight. Soon after the introduction of pasture infrastructure and animal grazing, it began to nest in 2016 in the barn **[9]** that is, for the time being, the only nest site in the reserve.


[10]


[11]

In spite of its size, the Black Stork *Ciconia nigra* **[10]** belongs to inconspicuous bird species owing to its timidity and secret way of life. In contrast to its better known white relative, it most often builds its nest high in an old Pedunculate Oak in a remote and quiet forest **[11]**. An important part of its exceptionally large home range (few 100 km^2) is the branched out network of various water bodies, where it feeds on fish and other aquatic organisms. The reserve's water bodies are regularly visited by a pair breeding in the near vicinity.

Migration stopover site

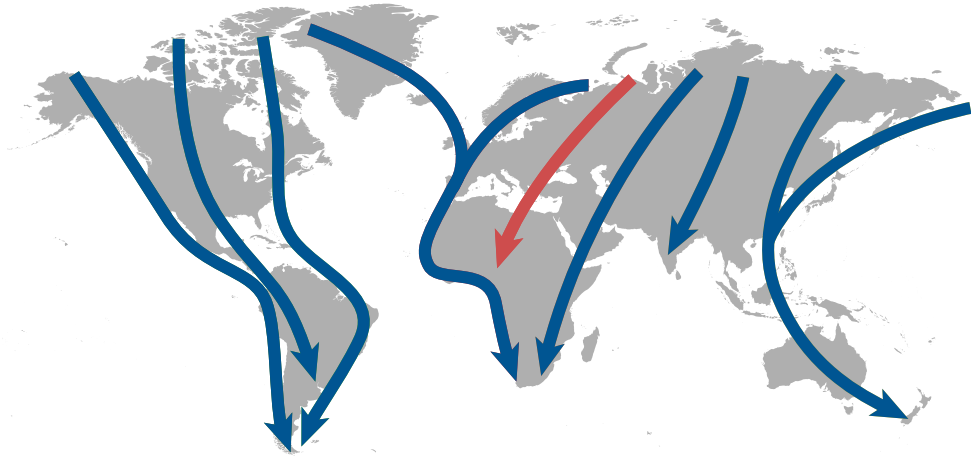
One of the most striking characteristics of the birds' world are migrations – directed, return movements of birds each year at approximately the same time, most often to certain regions or areas. The main reason for their migrations are seasonal changes in the availability of food in nesting areas. The consequence of migrations is a mass movement of populations twice a year between nest sites and wintering quarters in the south. It has been estimated that each year more than 5 billion Eurasian birds spend the winter in sub-Saharan Africa and that more than 50 billion birds migrate on the global scale.

There are only few long-distance migratory birds that are capable of completing a migration route in a single continuous flight. The majority of them must stop occasionally in suitable places (known as migration stopover sites) and replenish their energy reserves. Migration stopover sites and conditions there are of exceptional importance, for they affect not only the course of their migration but indirectly their breeding, survival and, in turn, the state of their populations and trends as well. Today, numerous migratory species are threatened also owing to the loss and degradation of their stopover sites.


[1]


[2]

Half of the approximately 10,000 described birds in the world and a good three fourths of all species recorded in Slovenia are migrants. Bird migrations include movements at distances from few tens to several thousands of kilometres. As far as the Robin *Erithacus rubecula* **[1]** is concerned, only populations from the northern and eastern parts of Europe are known to migrate, while Southern and Western European populations are more or less sedentary. During the winter and migration period we can thus observe individuals from Scandinavia, Russia and the Baltic states, while the individuals breeding in our country spend the winter in the Mediterranean. The Common Tern *Sterna hirundo* **[2]** is a long-distance migrant. In a few weeks, individuals from Central Europe cover 5,000 km to the seashores of Western Africa, where they spend the winter along the highly productive upwelling regions. Its relative, the Arctic Tern *S. paradisea*, covers the distance of 70,000 km between the Arctic nest-sites and wintering quarters in the Southern Ocean in a single migration cycle, which is the longest distance among all birds.



The majority of birds migrate along the well-established migration corridors (flyways), which include an entire area (land, oceans and air space), across which species or groups of birds move during their migration. As far as waterbirds are concerned, we basically distinguish eight or nine global flyways, three of which include the territory of Europe. Slovenia is situated in the region of the Black Sea-Mediterranean flyway between the eastern part of Europe and Northern and sub-Saharan Africa (red arrow). Part of it is also the Adriatic Flyway or the Adriatic-Tunisian migratory route, which connects Central Europe with North Africa across the east coast of the Adriatic Sea, Italy, Sicily and Malta.

Natural and semi-natural wetlands have an important role of migration stopover sites and are key factor in the conservation of waterbird populations. This holds true particularly to waders and ducks, which owing to the specific ecological requirements usually have only a limited number of potentially suitable migration stopovers available along their migration routes. These are often far apart, and due to the high number of simultaneously occurring individuals an intensive competition for food takes place there.


[3]


[4]

The number and duration of stopovers during the birds' migration cycle and the abundance of individuals at separate stopovers greatly differ among species also owing to their different migration strategies. The nominotypical subspecies of the Red Knot *Calidris c. canutus* **[3]** breeds in the Arctic tundra of Northern Siberia between 75 and 80° latitude and winters in coastal wetlands of Western Africa. During the autumn migration, the practically entire world population of the species (› 500,000 individuals) gathers at a single migration stopover area, i.e. in the intertidal zone of the Wadden Sea (Germany/Holland), while at the most important wintering quarters, i.e. Banc d'Arguin in Mauritania, ca. 75% of its population spends the winter. The route between the two areas is covered by these birds in a single uninterrupted 5,000 km long flight; before taking off, they accumulate ample fat reserves, owing to which their body mass doubles. The Wood Sandpiper *Tringa glareola* **[4]** is a breeder of northern parts of Europe and spends the winter in sub-Saharan Africa. The first part of some 7,000 km long migratory route south includes a series of short flights between stopover sites, where individuals stay for a few days at the most, accumulating only low fat reserves. This, however, is followed by a longish stay and increase in their body mass by 20-30% before crossing the Mediterranean Sea and Sahara. During spring migration, Wood Sandpipers reach Southern Europe badly emaciated, but gradually replenish their reserves through intense feeding between numerous short stopovers on their way to their nest sites. The migration takes place dispersedly in a wide belt of Europe, without major aggregations of individuals. The Ormož basins are one of the few sites in Central Europe where several hundred individuals were observed in a single day, both in spring and autumn.


[5]


[6]

The group of migratory birds comprises considerably more species with declining populations than found among sedentary birds. The most important threats to migratory birds are: (a) destruction and deterioration of their habitats at nest-sites and/or wintering quarters, (b) loss of migration stopover sites, (c) hunting pressure in Southern Europe and Northern Africa, and (d) climate change. It has been estimated that more than 2 million birds are shot each year along the Adriatic Flyover alone. In most countries in this particular part of Europe, uncontrolled hunting and widespread illegal shooting, even at the most important stopover sites in the region, pose a major problem. Slovenia, however, is a bright exception in this respect. With a total prohibition of hunting, NROL is one of the last quiet and safe staging areas for waterbirds on their migratory route south, which is one of the most important achievements in this region so far. Still, it has not always been so – in the 1980s, for example, hunters were intensively killing birds in TSO's basins, while illegal hunting of waterbirds on the Croatian side of Lake Ormož was regularly taking place still no more than a few years ago **[5, 6]**. Well documented is the outcome of one of such hunting rampages on 10 August 1985, during which the following species of birds were killed in the basins: 75 Mallards, 3 Teals, 6 Coots, 3 Wood Sandpipers, 2 Common Sandpipers, 2 Redshanks, 2 Green Sandpipers, 1 Ruff.

Position of NROL on the migratory route of various species of birds, depicted with locations of birds ringed abroad and later recorded at NROL (red points, 42 locations) and birds ringed at NROL and later recorded abroad (green points, 53 locations).

The former category includes 14 and the later 17 bird species, respectively. Species with highest number of recoveries are Barn Swallow *Hirundo rustica* (15) and Sedge Warbler *Acrocephalus schoenobaenus* (11). The longest-distance recovery concerned a Barn Swallow recovered in Eilat, Israel (2481 km away). Source of data: Slovenian bird ringing centre (SCOP), Slovenian Museum of Natural History.

Bird habitats

The largest part of Ormož basins is covered by the wetland within existing dikes, where the open water surface alternates with shallow areas and bare mudflats, extensive reed beds, bulrush stands and other marsh vegetation types. On the edges and raised parts of the basins and elsewhere on wetter grounds nearby, these turn into sections with predominant tall herbs and scrubs. Woodlands are mostly situated on the reserve's edge, and apart from white willow and poplar stands and the complex of riverine oak-ash-elm forest, a few poplar plantations from the time when TSO was still functioning can also be found here. Mown and grazed grasslands have been reinstated in former ruderal tracts of land, areas for depositing materials and boundary areas that are increasingly overgrown with invasive plants.

Distribution (above) and areas (above on the right) of the main habitats within Ormož Basins Nature Reserve (as in 2015).

Habitat	Area (ha)	%
Open water [1]	3,8	6,1
Emergent vegetation [2]	15,6	24,9
Woodland and scrubs [3]	17,6	28,0
Grassland [4]	8,8	14,1
Herbaceous vegetation [5]	13,9	22,2
Other	2,9	4,7
Total	62,7	100,0


[1]


[2]


[3]


[4]


[5]


[6]


[7]


[8]


[9]


[10]

The bare and sparsely vegetated mudflats **[6]** are important for numerous shorebird species, which characteristically distribute themselves with regard to the type of food and foraging maneuvers in the gradient of varying water depths, which can be shown for the area of Ormož Basins with several regularly occurring species. Apart from this, the small islets, inaccessible to terrestrial predators, and other open flat surfaces along the water are at the same time also nest-sites of some species from this group of birds. The Little Ringed Plover *Charadrius dubius* **[7]** has a short bill and feeds by pecking invertebrates from the muddy surface and along the water edge on the basis of its visual perception; The Curlew Sandpiper *Calidris ferruginea* **[8]** thrusts its long and curved bill into the mud and thus probes the soft substrate, often moving into the depth of about 5 cm by doing so. This species detects its prey with the aid of tactile receptors in its bill. The Greenshank *Tringa nebularia* **[9]** is able to feed due to its larger size and long bill in deeper water (up to 12 cm), when with a forwardly inclined posture as well as semi-open and partially submerged bill pursues and often catches little fishes. The islets and mudflats in NROL basins are one of the few Black-winged Stilt *Himantopus himantopus* **[10]** nest-sites in the continental part of Slovenia.


[11]


[13]


[12]


[14]

Reed beds, either pure stands of Common Reed *Phragmites australis* or in combination with other marsh plant species such as bulrush *Typha* sp., bur-reed *Sparganium* sp., club-rush *Schoenoplectus* sp. and others, are constituent parts of numerous lowland wetlands. This highly productive, although fairly homogenous and simple habitat from the aspect of its structure, provides shelter in different seasons of the year to many bird species, while the number of specialized species, which are fully confined to it during breeding, is relatively small in Europe (< 10 species). Adaptations of birds include cryptic colouration (**[11]** prevailing light brown shades, streaky plumage – e.g. in Great Bittern *Botaurus stellaris*), anatomic characteristics of legs and the manner of moving up the vertical structures (**[12]** climbing up the stalks – e.g. Great Reed Warbler *Acrocephalus arundinaceus*) and other behavioural characteristics (**[13]**nest building by attaching it to stalks – e.g. Reed Warbler *A. scirpaceus*). For some species, reed beds are also a significant source of food: in spring, Coots *Fulica atra* regularly forage on young shoots, whereas in summer they feed on common reed leaves; during breeding, the Bearded Tit *Panurus biarmicus* searches for insects and spiders in reed beds, while in winter it feeds on small fruits of common reed and bulrush **[14]**.


[15]


[16]


[17]


[18]


[19]

Lowland forests, semi-natural and natural stands with predominant 20–30 m high trees on temporarily flooded grounds, are a distinctly heterogeneous habitat with characteristic bird species from well-developed layer of undergrowth and herbs to the highest tree crowns. About a third of all forest breeders in the area of the nature reserve are hole-nesters, nesting in cavities in trunks and larger side branches of trees. Woodpeckers excavate their nest holes by themselves each year with their strong bills (primary hole-nesters), which also applies to the largest representative of this group of birds, the Black Woodpecker *Dryocopos martius* **[15]**. Secondary hole-nesters occupy abandoned woodpeckers' holes or other suitable cavities available in tree trunks. The most numerous among them is the Starling *Sturnus vulgaris* **[16]**, which forms smaller colonies in large trees with numerous cavities and feeds mostly in the surrounding farmland. The Chiffchaff *Phylloscopuis collybita* **[17]** builds a well-hidden domed nest with side entrance on the ground or low above it and feeds on small insects high in tree crowns. The Golden Oriole *Oriolus oriolus* **[18]** is one of our most colourful birds. This otherwise timid species spends most of its time in the canopy shelter where it builds, several metres above the ground, a cup-like nest, hanging from the underside of the fork of two thin branches. This bird picks butterfly and beetle larvae from leaves of crown branches. The nest of the Song Thrush *Turdus philomelos* **[19]** is lined with mud on the inside and is usually built in a low tree or bush 1 to 2 metres high in the undergrowth. Its main food are snails he searches for on wet ground and crushes them by striking them against a stone, around which numerous shells gradually pile up **[20]**. The Short-toed Treecreeper *Certhia brachydactyla* **[21]** uses its climbing legs to move up the trunks and pick spiders and insects with its long bill from behind the bark. It nests in tree crevices, often behind detached bark.


[20]

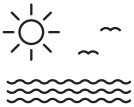

[21]


[22]


[23]

Grassland species are currently the most threatened group of birds. Owing to the widespread loss of extensively farmed grasslands (intensification of farming, conversion into arable fields, land abandonment), their populations declined in Slovenia by more than a third in the last 10 years alone, similar as elsewhere in Europe. With the exception of Ormož Basins, there is practically no permanent grasslands left in the entire lowland part of the Lower Podravje region. The Red-backed Shrike *Lanius collurio* **[22]** is indicator species of the mosaic farmland, where grasslands intertwine with numerous scrubs, hedgerows, individual bushes and other structures in predominantly open habitats **[23]**. This species prefers low vegetation, given that its major prey consists of large insects, which it catches mainly on the ground.

Nature conservation importance



The area of Ormož basins is of great national and international importance due to significant number of species of conservation importance, occurring in the reserve during the breeding and migration periods. The Marsh Harrier *Circus aeruginosus* breeds only here, whereas regularly occupied nest-sites in at least seven species have been recorded at less than five other sites in Slovenia. Due to their small and/or decreasing populations and breeding in a geographically very limited area, all have been included in the Red list of threatened breeding birds of Slovenia. Furthermore, the Ormož Basins are among the most important stopover sites for migratory birds in our country. As far as other groups of organisms are concerned, most attention deservedly goes to the regular occurrence of the Eurasian Otter *Lutra lutra* and two threatened invertebrate species, as well as to few protected habitat types.

Owing to the important populations of certain threatened animal species and habitat types of European concern, the Ormož Basins have been included into the network of EU protected areas Natura 2000 sites as part of the special protection area (SPA) Drava (Id. No. SI5000011) under the Birds Directive and part of the special area of conservation Drava (Id. No. SI3000220) under the Habitats Directive. Both Natura 2000 sites have been designated with a special decree upon Slovenia's entry into EU in 2004.

Table:

Species of conservation concern in Ormož Basins, for which the special protection area (SPA) Drava was designated.

Population – estimate of breeding population size (pairs – p) or non-breeding population size (individuals – ind.) at Ormož basins (max. – highest number of simultaneously registered individuals);
% SPA – percentage of SPA Drava breeding population within Ormož basins;
Season – season to which estimates refer (B – breeding, W –wintering, M – migration);
Red List – threat category in the Red list of threatened breeding birds of Slovenia (CR – critically endangered species, EN – endangered species, VU – vulnerable species, NT – near threatened species).
Species in bold breed in Slovenia at less than five other sites.

Species	Population	% SPA	Season	Red List
Gadwal	**1-8 p**	**100,0**	**B**	**VU**
Garganey	**5-12 p**	**100,0**	**B**	**VU**
Pochard	1-10 p	100,0	M	EN
Ferruginous Duck	**1-4 p, max. 16 ind.**	**100,0**	**B, M**	**CR**
Tufted Duck	5-15 p	33,0	B	VU
Little Bittern	1-3 p	44,0	B	VU
Little Egret	max. 9 ind.	-	M	
Great Egret	max. 18 ind.	-	W	
Black Stork	1 p	17,0	B	NT
Honey Buzzard	1 p	3,0	B	
White-tailed Eagle	1 p, max 3 ind.	50,0	B, W	VU
Marsh Harrier	**1-2 p, max. 27 ind.**	**100,0**	**B, M**	
Hen Harrier	max. 5 ind.	-	W, M	
Water Rail	5-10 p	50,0	B	NT
Spotted Crake	1-3 p	100,0	B	EN
Little Crake	1-3 p	100,0	B	VU
Black-winged Stilt	**2-19 p**	**100,0**	**B**	**NT**
Little Ringed Plover	2-20 p	15,0	B	NT
Lapwing	5-40 p, max. 1324 ind.	30,0	B, M	EN
Ruff	2000-2900 ind.	-	M	
Common Sandpiper	max. 30	-	M	
Green Sandpiper	3700-5400 ind.	-	M	
Redshank	**2-11 p**	**100,0**	B	**EN**
Black-headed Gull	**20-140 p**	**28,0**	**B**	**EN**
Common Tern	30-112 p	63,0	B	VU
Grey-headed Woodpacker	1 p	3,0	B	
Black Woodpacker	1 p	7,0	B	
Red-backed Shrike	3-5 p	1,0	B	
Penduline Tit	1-3 p	2,0	B	NT
Savi's Warbler	5-10 p	30,0	B	NT
Collared Flycatcher	1-3 p	<1	B	

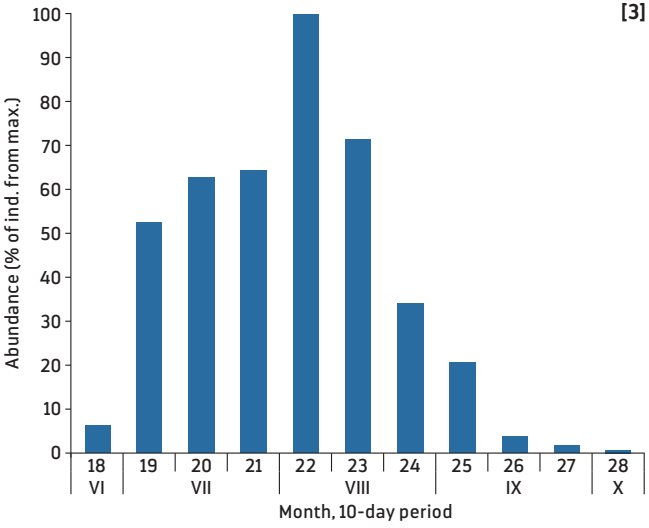
The Gadwall *Anas strepera* and Pochard *Aythya ferina* **[1]** are breeders of nutrient-rich continental wetlands. In our country, the first now breeds only at Medvedce Reservoir (Dravsko polje), whereas the latter has been recorded to breed in a smal number of sites in NE Slovenia. Although the Pochard inhabits a large part of Eurasia, it was listed in 2015 among the globally threatened species (category VU), considering that its numbers decreased by 40% in the last two decades.

The Marsh Harrier *Circus aeruginosus* has confirmedly bred in the Ormož Basins since 2010; this is its only regularly occupied nest site in Slovenia. Territorial and display flights of the pair with characteristic male calls can be observed and heard above the basins from the end of March onwards.


[2]

For the Ruff *Calidris pugnax* **[2]** (2,000–2,900 ind., spring migration) and Wood Sandpiper *Tringa glareola* (3,700–5,400 ind., autumn migration; figure **[3]** depicts occurrence dynamics of the species), an estimate of the size of the entire migratory population, which utilizes the basins for a stopover in a single migration season, was made on the basis of regular censuses and data of the average turnover of migrating individuals in comparable areas abroad. For these two species, the area of Ormož Basins is thus probably the most important migration stopover in our country.

[3]




[4]


[5]

After its population collapse owing to the negative impacts of pollution with toxic chemicals, hunting and habitat loss in the 1960s and 1970s, the Eurasian Otter *Lutra lutra* **[4]** recovered quite significantly thanks to its statutory protection in the majority of European countries. In Slovenia it was legally protected in 1973; in 1960, angling clubs were still offering awards for the killed otters. Owing to its hidden way of life – it hunts mostly at dusk – the chance of observing it in its natural environment is very small. Its presence is most often revealed by the characteristic prints of its paws and excrements **[5]** with which it marks its territory. In the last few years, the species has also been regularly occurring in the Ormož Basins and close by.

Habitat type of riparian mixed forests of *Quercus robur, Ulmus laevis* and *Ulmus minor, Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (Ulmenion minoris) (Code 91F0 in Annex I of the Habitats Directive) represents typical lowland floodplain forests along larger watercourse, thriving on undeveloped grounds with river deposits, where the groundwater level is somewhat lower and the forests are flooded only during high waters. Due to the numerous negative impacts, very few stands of this kind have survived in Slovenia. They are threatened by drainage, urbanization, thinning and spreading of the nonindigenous Black Locust *Robinia pseudoacacia* in the area's drier parts. The forest complex within NROL is one of the better preserved fragments along the Drava River.

European Pond Turtle *Emys orbicularis* is the only native freshwater turtle in Slovenia. It is threatened species on national and international level, whilein the Pannonian part of the Drava River it is considered a protected species of Special Area of Conservation (SAC). In Podravje region its occurrence has recently only been confirmed at few locations, therefore finding an individual in Ormož Basins in 2017 is exceptionally good news.

Natura 2000 sites in the Pannonian part of the Drava River (National large-scale map © The Surveying and Mapping Authority of the Republic of Slovenia): Special protection area (SPA) Drava (Id. No. SI5000011) (bright red) and Special area of conservation Drava (Id. No. SI3000220) (dark red).

Nature reserve management

The former TSO's wastewater basins fell into the ownership and management of DOPPS by virtue of the exceptional importance of this area for breeding and migrating birds. Between 2012 and 2015, restoration of the wetland was implemented and visitor infrastructure built. To maintain the basins' long-term national and international conservation significance and implementation of the educational function of the reserve, appropriate conditions have to be provided in the area of Ormož Basins throughout the year. This is achieved through a regular implementation of management activities based on the reserve's goals.

Goals of the Ormož Basins Nature Reserve

The new arrangement of the former TSO industrial complex attempts to retain, through advancement and adaption to the existing status, a part of the identity of industrial facilities and to enable new functions of the reserve at the same time.

General long-term aims of the nature reserve management

(1) To restore and to maintain 50 ha of optimal habitats with emphasis on wetlands for breeding and migration stopover of nationally and internationally significant populations of target bird species.

(2) To set up and promote the area as a nature reserve open to the public, envisaged for education and awareness building of visitors and for high-quality experiencing of nature.

The nature reserve's conservation objectives

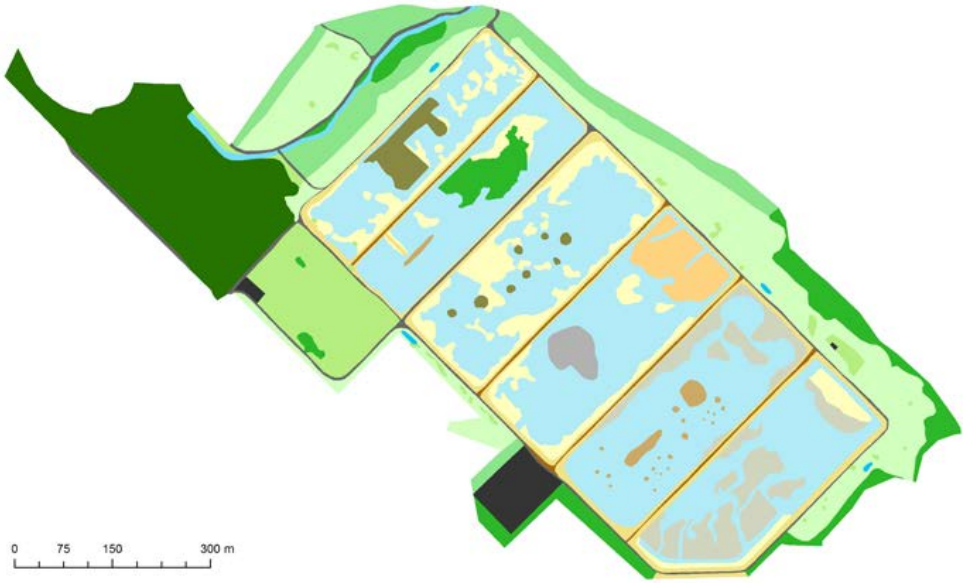
- To maintain the populations of threatened bird species through implementation of carefully planned measures.
- To implement the measures to increase the populations of bird species of conservation importance and to enable their settlement.
- To implement the measures to establish or improve the most important habitats for birds.
- To maintain the populations of other threatened and internationally protected plant and animal species and habitat types.
- To retain valuable natural features.
- To preserve the area's great biodiversity.

Conservation objectives of the Natura 2000 site

The Natura 2000 Management programme for Slovenia for the period 2014–2020 stipulates detailed conservation objectives and prescribes conservation measures for separate species and habitat types. Among the conservation measures in the special protection area SI5000011 Drava, restoration of the Ormož Basins is indicated in connection with 12 species, mostly as conservation measure for the restoration of their breeding habitat.

Target species and habitats

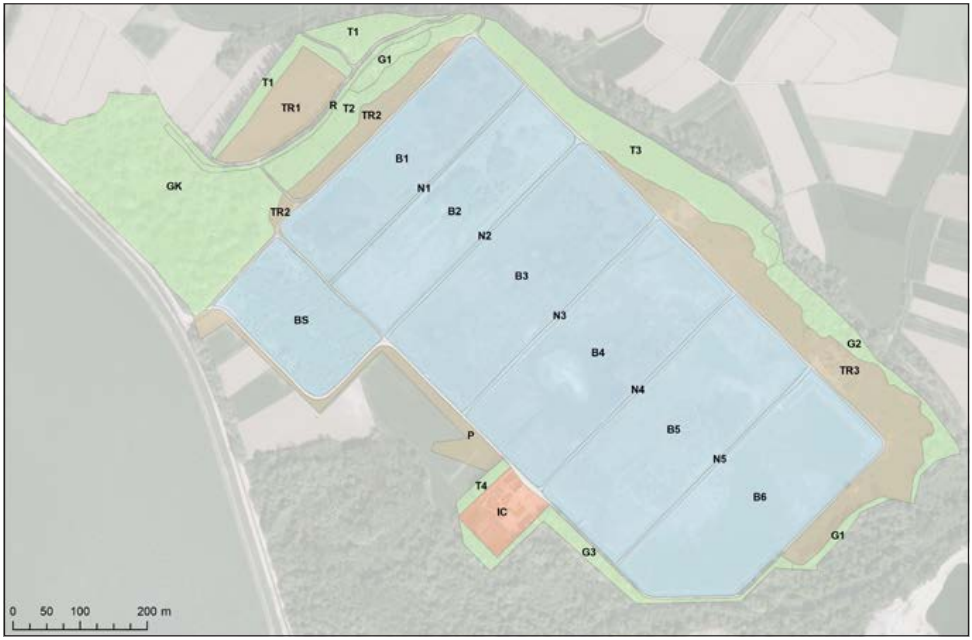
The NROL management plan stipulates the desired state of habitats and target species in the area of Ormož Basins, which is the basis for the reserve's divisioning into management units. Each management unit is represented by certain habitat type with the appertaining species and specific management regime.



Legend

- Scrub / Single tree
- Infrastructure
- Dirt road
- Pond
- Restored backwater
- Floodplain oak-ash-elm forest
- Mudflat
- Open water
- Island mostly without vegetation
- Island with herbaceous plants
- Lowland floodplain forest
- Gravel island
- Reed and bulrush stand
- Poplar plantation
- Grassland
- Grassy dyke crown
- Reed bed
- Herbaceous plants covering waterside bank of basins

The vision of the desired state of habitats in the area of Ormož Basins under the presumption of optimal management in accordance with the plan.



Units of the Ormož Basins Nature Reserve, where specific management measures are carried out, adapted to target species and habitats and other goals of the Reserve.

Basins (40 ha)

Basins 1 and 3

Target species: Ferruginous Duck *Aythya nyroca*, Pochard Aythya ferina, Tufted Duck *Aythya fuligula*, Gadwall *Anas strepera*, Garganey *Anas querquedula*, Little Crake *Zapornia parva*, Little Bittern *Ixobrychus minutus*

Habitat: Avg. water depth of ca. 1 m prevails, with shallower 10 to 50 cm deep parts and deeper 100 to 200 cm parts; indented and to terrestrial predators inaccessible islets with gentle banks, void of woody vegetation; extensive stands of herbaceous aquatic and emergent vegetation, particularly open inundated reeds and aquatic plants forming mats of floating leaves.

Surface area: 11 ha

Basin 2

Target species: Wood Sandpiper *Tringa glareola* and Ruff *Calidris pugnax* (migration), Black-winged Stilt *Himantopus himantopus*, colony of herons (Grey Heron *Ardea cinerea*, Little Egret *Egretta garzetta*, Night Heron *Nycticorax nycticorax*), Redshank *Tringa totanus*

Through management we wish to attain and maintain a similar state in the long run of Basin 3 as present here in the first year after the abolition of sugar production in TSO (2007).

Habitat: Predominantly very shallow water (< 20 cm), with gentle passages in the gradient of different depths, elongated, low and largely bare island with gently rising banks, aquatic part of the basin void of vegetation; predominantly dry, from the bank hardly accessible forest island with softwood trees

Surface area: 4.5 ha

Basin 4

Target species: Common Tern *Sterna hirundo*, Black-headed Gull *Chroicocephalus ridibundus*, Marsh Harrier, Ferruginous Duck, herons (Little Bittern, Bittern *Botaurus stellaris*, Purple Heron *Ardea purpurea*, Little Egret), Pochard, Tufted Duck, Gadwall, Garganey, Little Crake

Habitat: Predominant avg. water depth of ca. 1 m with two larger islands void of woody vegetation, inaccessible to land predators – one of them is bare and covered with shingle, the other with shallowly inundated reeds; extensive stands of herbaceous aquatic and emergent vegetation

Surface area: 6.5 ha

Basins 5 and 6

Target species: Wood Sandpiper, Ruff, other waders (migration), Black-winged Stilt, Redshank, herons (feeding), Curlew *Numenius arquata* (summer roost), ducks of the genus *Anas* (feeding, migration)

Habitat: Predominantly very shallow water (< 20 cm), with gentle passages in the gradient of different depths, a series of low and bare islets with gentle slopes, basins entirely void of woody vegetation, with rare low herbaceous vegetation; part of Basin 6 occasionally flooded grassland

Surface area: 12.5 ha

Native forests (9 ha)

Target species: Middle Spotted Woodpecker *Dendrocopos medius*, Collared Flycatcher *Ficedula albicollis*, Black Woodpecker *Dryocopos martius*, Penduline Tit *Remiz pendulinus*, Hermit Beetle *Osmoderma eremita*, Flat Bark Beetle *Cucujus cinnaberinus*

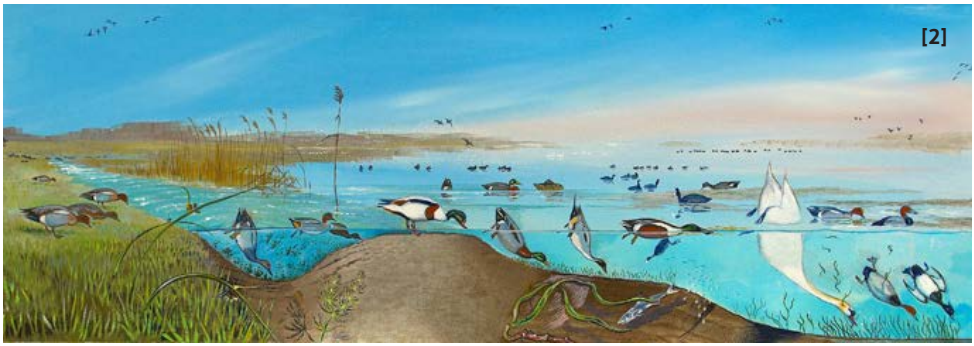
Habitat: Dense complex of old riverine floodplain forest and forest islands of softwood stands with prevailing old trees and large quantities of dead wood

Grasslands (9 ha)

Target species: Red-backed Shrike *Lanius collurio*

Habitat: Extensive grasslands with low vegetation and structural elements (solitary trees, bushes and smaller scrublands), the total surface area of which does not exceed 3% of the surface area of separate unit

[1]



[2]

A total of 35 species of shorebirds (without gulls and terns) have been recorded in Ormož Basins, their common characteristic being feeding in (occasionally) flooded areas and along banks. The highest densities of shorebirds occur in shallow and predominantly unvegetated wetlands (< 25% plant cover and their low height) with high biomass of invertebrates in muddy ground **[1]**. The majority of species feed in the water to the depth of 10 cm (max. ca. 30 cm). An important factor is also the topography of the feeding habitat, especially the gentle slope and the presence of little channels and structures that increase the effective surface area of the feeding habitat and availability of food for a wide range of species. Similar as shorebirds, different species of ducks distribute themselves (with regard to their feeding method) along the gradient of water depths, although in somewhat deeper parts. The density of dabbling ducks, which do not dive while searching for food, is the greatest in the shallow parts of the wetlands (depth < 25 cm) with undulating bottom, which provides for a wide range of different depths with gradual transitions. The biggest Mallard *Anas platyrhynchos* can feed down to the depth of 50 cm, the smallest Teal *A. crecca* down to ca. 20 cm. Some species most often feed by picking and filtering food on or just below the surface (e.g. Garganey *A. querquedula*, Shoveler *A. clypeata*), while the Wigeon *A. penelope* does so by grazing on land. Diving ducks (genus *Aythya*) usually search for food in the wetlands' deeper parts **[2]**. During the restoration of the wetland, when ground works were implemented, various structures (islets, channels, mudflats) were constructed in Basins 5 and 6 in accordance with these guidelines.

Backwater (0.5 ha)

Target species: *Graphoderus bilineatus* water beetle

Habitat: Partially shaded permanent water surface with overgrown natural banks and rich growth of aquatic and emergent plants

[3]

[4]

After the works carried out within the LIVEDRAVA project, the backwater in the area of Ormož Basins acquired natural characteristics such as gently sloping overgrown banks and meanders with aquatic plants **[3]**. In such a state, it is a suitable habitat for the colonization of *Graphoderus bilineatus*. This water beetle species usually breeds in shallow waters with Featherfoil *Hottonia palustris* (it lays eggs into it) that flourishes at the stated locality as well **[4]**.

Ferruginous Duck [1]

A specialist in habitat selection; for breeding it requires smaller wetlands in direct succession phase, with avg. depth of 1 m and 65-70 percent cover of aquatic and emergent plants, particularly pondweeds, bladderworts, Fringed Water-lily etc., where the overgrown parts alternate with open water surfaces. It feeds in parts with shallow water (30–100 cm) close to thick emergent vegetation or in shallow muddy areas. A very important source of its food are the larvae of midges Chironomidae, both in the breeding season and at the time prior to nesting. Ferruginous Duck is a species of global conservation concern (NT category – Near Threatened); its small Slovenian population (10–30 pairs) is Critically Endangered (CR category). Ormož Basins are a great potential for the establishment of internationally and nationally important stable population of this species.

Little Crake [2]

The habitat of this species are dense, mature reed beds with numerous passages between reed stands and parts with open water within reed beds and channels, mixed stands of reed with bulrush and large sedge communities or pure bulrush stands and other types of emergent vegetation. An important factor as far as reed beds are concerned is the presence of a layer of old, broken reed stems. Its nest is always located above ca. 50 cm deep water, few metres away from the edge of open water or land. In optimal conditions it forms loose colonies. In Slovenia it breeds in small numbers at a few scattered localities (20–50 pairs), the only somewhat bigger population inhabiting Lake Cerknica. NROL is the only nest-site of this bird in the Drava River region. Here, an extensive area of the species' optimal habitat can be maintained through suitable management.

Little Bittern [3]

Breeds in mature reed beds, to a smaller extent also in bulrush stands and other similar vegetation, rarely in trees. It favours inundated reed beds (with depth of water below nests 40 cm on average), rarely nests in dry areas. Wetland size is not an important factor in its habitat selection, as smaller water bodies (min. 0.8 ha) or smaller reed beds (min. 200 m^2) suit it as well; more important is the structure of habitat, with the outer edge of reed bed at its transition to open water surface of irregular shape, with as great ratio between reed bed's surface area and the length of water edge as possible. In Ormož Basins, a significant increase in the number of breeding pairs is expected, as well as development of one of the most important local populations in the continental part of the country.

[1]

[2]

[3]

Middle Spotted Woodpecker [4]

A specialist, confined to mature deciduous forests with prevailing oak and softwood tree species (willows, poplars). The breeding density of this bird species increases with the age of stands and increased share of preferential tree species. It feeds mostly in tree crowns and on trunks of living trees, whereas the dead but still standing trees are significant especially for excavation of breeding holes. Males' mating success is strongly associated with the size of the forest fragment, in which he defends his territory – the smaller the size of the fragment of otherwise suitable habitat, the smaller the possibility that the male will attract a female and reproduce successfully. Along the Drava River it occurs in small numbers in the areas with suitable surviving forest stands, such as the complex of an old riverine floodplain forest in the area of NROL.

Flat Bark Beetle *Cucujus cinnaberinus* [5]

This saproxylic beetle species occurs in older forest stands and is especially abundant in riverine floodplain forests. Adults and larvae are predators, living under the bark of standing or lying trees, particularly poplar, willow, elm, oak and ash. Of great importance are dead trees in the early phase of decomposition and older trees, given that the relative abundance of individuals considerably increases in more than 70 cm thick tree trunks. Owing to the intensive management, there is not much dead wood in most forests, which is the reason why this bark beetle is rare with clumped distribution. Only few records are known about its occurrence along the Drava River; in the forests within Ormož Basins it is, on the other hand, a well-distributed species.

[4]

[5]

Problems and threats

After the factory was closed down and production ceased, the supply of water into the basins was stopped as well, which caused rapid drying and overgrowing of the basins and, in turn, disappearance of the majority of most important species. At the end of 2014, water supply was provided again within the LIVEDRAVA project with a possibility of optimal control of the water levels in separate basins. In spite of the re-established constant water supply, the basins, dikes and surrounding areas are subject to overgrowing with woody and herbaceous plants, including non-indigenous invasive species.

Legend

- Forest clearing
- Scrub with herbaceous plants (mostly Elder)
- Agricultural land
- Dirt road
- Wooden structure
- Gravel road
- Riparian forest (Poplar, Alder, willows)
- Reed, bulrush and herbaceous plants
- Sedges, reed, bulrush and herbaceous plants stand
- Pond
- Rubble
- Information centre area
- Restored backwater
- Open water
- Parking
- Floodplain forest
- Gravel surface
- Bulrush stand
- Reed and bulrush stand
- Poplar plantation
- Grassland
- Grassland with woody vegetation (overgrowing with willows)
- Grassy dyke crown
- Reed bed
- Herbaceous vegetation (mostly nettles)
- Herbaceous vegetation (mostly goosefoot species)
- Herbaceous vegetation (mostly goldenrod)
- Herbaceous vegetation (mostly grasses)
- Herbaceous vegetation (grasses and Reed)
- Herbaceous vegetation (Reed)
- Herbaceous vegetation (Reed, goosefoot species and nettles)
- Herbaceous vegetation (Reed and goosefoot species)
- Herbaceous vegetation (goldenrod and nettles)
- Herbaceous vegetation covering waterside bank of basins
- Sedges with Reed

During the sugar factory operations, vegetation growth in the basins was highly limited as a result of the regular wastewater inflow (**[1]** situation in 2006). After the abandonment of sugar production, the basins were subjected to a rapid overgrowing, and due to the interruption of supply through pipes water was becoming increasingly scarce (**[2]** initial situation prior to the ground works for the restoration of habitats in 2013) (ortophoto © The Surveying and Mapping Authority of the Republic of Slovenia). After the conclusion of ground works, introduction of management with grazing and mowing as well as the implementation of other measures for the restoration of desired state, the vegetation structure changed significantly in 2015. The thick woody vegetation and ruderal areas on the reserve's boundary areas fully transformed into grasslands that had earlier not existed in the area of the reserve. Thus the surfaces of open waters (+137%), reed and bulrush stands (+203%) and reed beds (+20%) increased to a great extent **[3]**. In spite of it all, however, the vegetation types from 2015 still do not represent the target situation of habitats in the area of NROL.

Management methods

The management of Ormož Basins Nature Reserve includes several thematic blocks.

Water regime management

Envisaged to attain optimal water depths and to it related extent, structure and arrangement of desired aquatic and riparian habitats in the area of the basins. It is implemented with a controlled water supply and emptying of the basins in accordance with the management plan or the situation in the field, and is adapted to the requirements of birds species of conservation importance. Generally, in the warm part of the year, lower or the so-called summer water levels are maintained in the basins and, on the other hand, higher or the so-called winter levels in the cold part of the year.

Woody vegetation control and management

Includes regular manual removal of woody plants, controlled grazing by water buffaloes, mowing and mulching to prevent excessive overgrowing of the basins.

Restoration and maintenance of grasslands

The basis is extensive grazing in the entire grassland area by relocating the herd between pasture units. If necessary, preparatory works for the restoration of grasslands in the target area are also implemented.

Conservation of natural softwood forest stands

Oriented at providing optimal conditions for threatened animal species either by retaining the current state or by measures to increase dead wood mass and to conserve protected forest habitat types.

Monitoring implementation

Through regular monitoring of bird populations, other animal groups and plants of conservation importance, development of vegetation and target habitats as well as other factors significant for the management, efficiency of the measures and achievement of the reserve's objectives are evaluated.


[1]


[2]


[3]


[4]

The siphon **[1]** supplies water over the crown of the lake's embankment into 1.4 km long pipeline and 150 m long ditch. Pipeline runs along the northern edge of all basins and is at places where water is supplied to the basins equipped with shut-off valves, which enable their independent filling **[2]**. Ditch runs into second basin **[3]**. Water is led out of the basins via the old TSO system through concrete outlet facilities **[4]** with its final draining into a branch of Pušenski potok (stream).

Maintenance of low vegetation in the basins with shallow water, on dikes and in boundary areas is largely implemented through grazing by water buffaloes. Domestic water buffalo *Bubalus bubalis* originates from wild water buffalo *B. arnee* of Asia and is one of the oldest domestic animal species. Their wide hooves enable them to walk on very soft ground without sinking into it. Their selection of food is more diverse and, on top of it all, these animals are physiologically better adapted to a poorer quality fodder than other cattle species. In comparison with other grazing animals, they are thus more suitable for aquatic environments with predominant marsh vegetation; their utilization is particularly advisable in the area of wetlands for conservation management of lush vegetation growth. Grazing is also the most suitable form of management of the areas for shorebirds, as it creates bare invertebrate-rich ground.

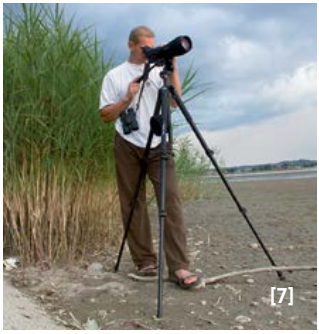

[5]


[6]

Implementation of grazing in such a large area requires suitable infrastructure. The pasture electric fence **[5]** with the total length of 12.8 km prevents grazing animals from entering undesired areas and enables spatially and temporally controlled grazing in compliance with the reserve's objectives. The stable **[6]** provides grazing animals with protection during unfavourable weather conditions and at the same time serves as a garage for agricultural machinery and a workshop. The smaller facility on the north side of the basins is meant for a regular storage of fodder and watering of grazing animals. At the beginning of the active management, parts of the area were included in the system of Units of Agricultural Land, where agricultural use takes place, as DOPPS is a registered agricultural holding with ecological farm certificate.

In 2013, a restoration experiment to increase dead wood mass was introduced in the area of Ormož Basins by bringing poplar trunks into the forest stands with the intention of improving the habitat of threatened Flat Bark Beetle *Cucujus cinnaberinus*, species of conservation concern.

[8]



[7]

The abundance of birds in the area of the basins is monitored by regular censuses in 10-day intervals that take place throughout the year and include both breeders and migratory/wintering species. This is carried out by ornithologists well trained for such work and other DOPPS associates **[7]**. Due to the poor visibility owing to terrain, monitoring of the vegetation and habitat development in the basins is a huge challenge that demands an innovative approach **[8]**.

Ormož basins nature reserve visiting

Nature reserve Ormoške lagune is open to the public as per current opening hours and is admission free for individual visitors. Guidance, however, is compulsory for all groups exceeding ten persons and all formal educational institution groups (kindergarten, school, university, etc., irrespective of the number of visitors). Payable group guidance is conducted after preliminary announcement and booking of the term by the reserve's manager.

How to get to the reserve?

Entrance to the reserve is located at the beginning of the macadamized access road in the vicinity of Pušenci village near Ormož. From Ormož bypass 300 m east of Ormož (centre)-Ljutomer intersection turn south to Ljutomerska/ Opekarniška cesta (road) and after ca. 1.5 km turn left immediately after crossing the railway line. Drive straight along the left embankment of Lake Ormož (a few metres after the crossing ignore the turning for the hamlet called Amerika) and after 1.5 km immediately after the edge of a larger forest you will reach the access road to the reserve. Turn left, from where only 50 m will still have to be covered to the reserve's entrance point.

The reserve can also be reached by bicycle or foot. The shortest route from the main bus station in the centre of Ormož to the reserve's entrance point is ca. 3.7 km. The best way if you choose to go there by foot is to use the left embankment of Lake Ormož. At its beginning pass through the gate in the fence opposite the former sugar factory and leave the lake by going down the steps and crossing the little bridge precisely opposite the entrance to the reserve.

Information for visitors

Entrance to the reserve is permitted only at the entrance point. Visitors may move around the reserve on foot in the part open to the public, along the marked educational trail, at observation points and in the Nature reserve's garden. Cycling and the use of cars for the transportation of people with disabilities is permitted to the garden. At the entrance point there is a car park intended for cars, buses, motorcycles and bicycles. A covered bike stand is located next to the garden. In the entire area of the reserve, visitors are obliged to respect the reserve manager's instructions and guidelines and to act according to them.

Opening hours: 8.00–17.00 hrs (1 Oct–31 Mar)
7.00–19.00 hrs (1 Apr–30 Sep)

Recommended equipment: trekking shoes, mountaineering or rubber boots (in the event of visiting the unfortified part of the trail), sun protection cap or hat (in the summer), repellent against biting insects and ticks, sufficient quantity of drinking liquids, binoculars

Distances from the entrance point: Observation Point 1 (200 m), Observation Point 2 (500 m), Nature reserve's Garden (700 m), Observation Point 3 (800 m), Observation Point 4 (1 km); total trail there and back (2 km); length of the unfortified part of the trail in Forests 1 and 2 (200 m)

Contact

DOPPS - BirdLife Slovenia (Društvo za opazovanje in proučevanje ptic Slovenije)
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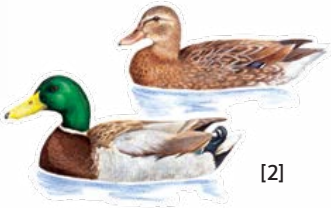

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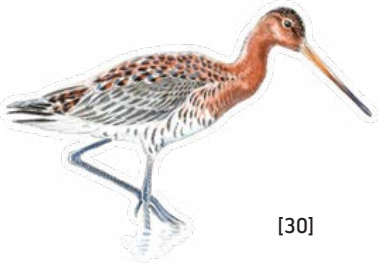

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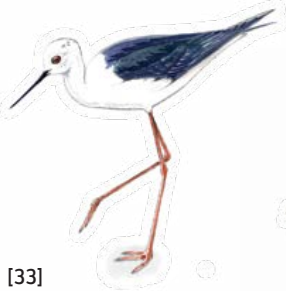

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[28] Marsh Sandpiper
[29] Redshank
[30] Black-tailed Godwit
[31] Lapwing
[32] Snipe
[33] Black-winged Stilt
[34] Ruff
[35] Dunlin
[36] Curlew
[37] Little Ringed Plover

My visit to Ormož Basins Nature Reserve

Name: .....

Date: ..... **Hour:** .....

Observed bird species

	✓	Number		✓	Number
Mute Swan	☐	.....	Moorhen	☐	.....
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Grey Heron	☐	.....	Little Ringed Plover	☐	.....
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Contents of info tables

1. **Entrance point:** Basic information on the reserve
2. **Forest I:** Characteristics, habitat type, forest birds
3. **Basin 1:** Species and groups of birds in the reserve, identification of waterbirds (Part 1)

4 **Basin 2:** Bird migrations

5 **Basin 3:** Habitats of waterbirds, the story of containers – bird observation hides

6 **Basin 4:** Ormož Basins layout within the LIVEDRAVA project (wetland restoration, infrastructure)

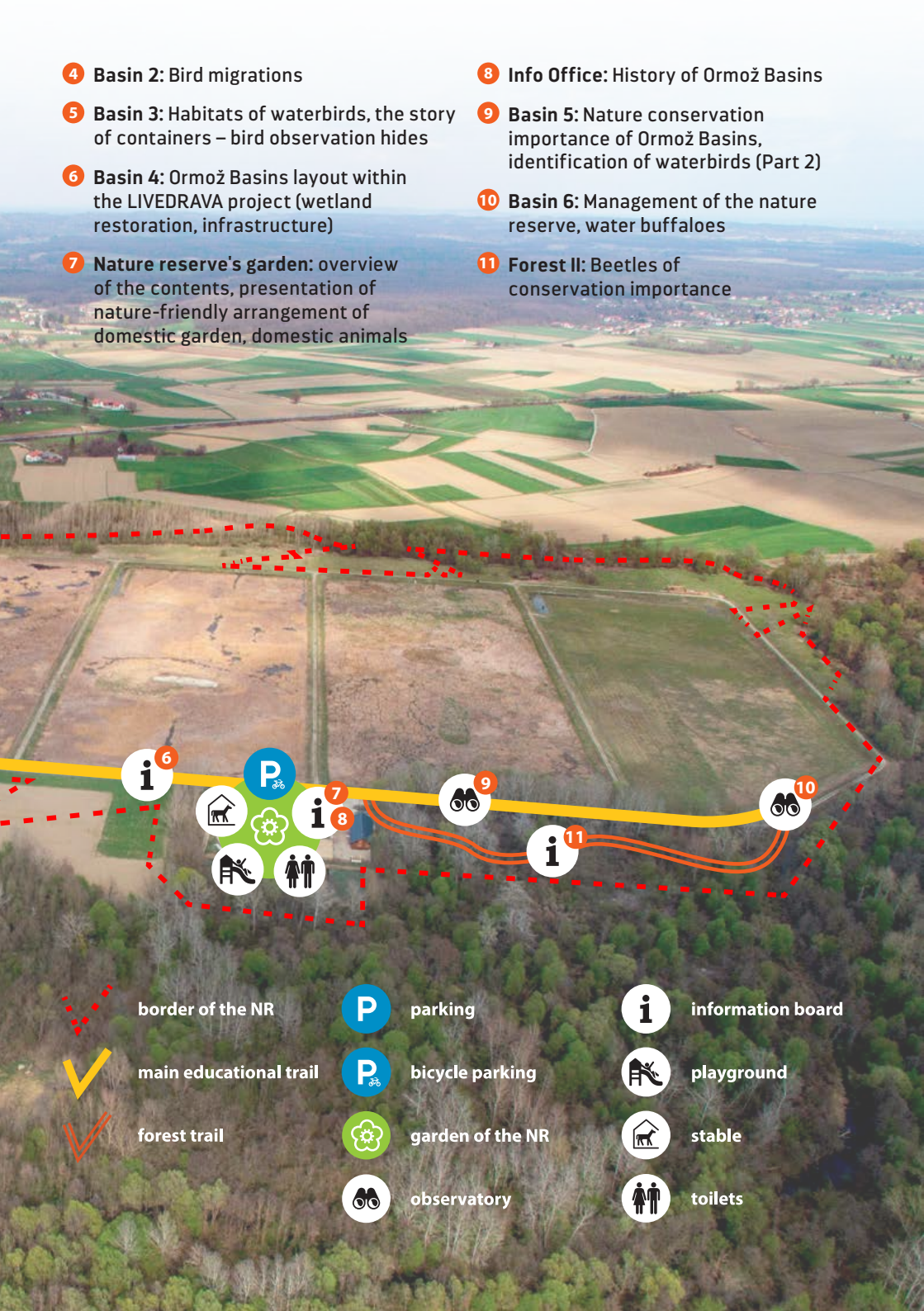
7 **Nature reserve's garden:** overview of the contents, presentation of nature-friendly arrangement of domestic garden, domestic animals

8 **Info Office:** History of Ormož Basins

9 **Basin 5:** Nature conservation importance of Ormož Basins, identification of waterbirds (Part 2)

10 **Basin 6:** Management of the nature reserve, water buffaloes

11 **Forest II:** Beetles of conservation importance



Ormož Basins are a wetland of exceptional national and international importance attracting both breeding and migrating bird species of conservation importance. This guidebook aims to show life in various forms thriving in what used to be an abandoned industrial area, saved from destruction and later declared a nature reserve dedicated to conservation of biodiversity providing relaxed, informative and high quality experience of nature.

Life

NATURA 2000

DOPPS

BirdLife INTERNATIONAL

OBČINA ORMOŽ

MESTNA OBČINA PTUJ

DRAVA
VODNOGOSPODARSKO PODJETJE PTUJ, d.d.

dem
dravske elektrarne maribor

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA OKOLJE IN PROSTOR