EU LIFE Programme project
"Optimising the Governance and Management of the Natura 2000 Protected Areas Network in Latvia"
(LIFE19 IPE/LV/000010 LIFE-IP LatViaNature)

Conservation Objectives

Abavas senleja

LV0302100

2024

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The work was carried out within the project "Optimising the Governance and Management of the Natura 2000 Protected Areas Network in Latvia" (LIFE19IPE/LV/000010 LIFE-IP LatViaNature), co-financed by the European Union's LIFE programme and the Latvian State, from October 2021 to April 2024.

Projekts "Natura 2000 aizsargājamo teritoriju pārvaldības un apsaimniekošanas optimizācija" (LIFE19 IPE/LV/000010 LIFE-IP LatViaNature) tiek īstenots ar Eiropas Savienības LIFE programmas un VDAA finansiālu atbalstu.

Introduction

The necessity of determining site-specific conservation objectives (SSCOs) at Natura 2000 site level derives from Article 4(4) of the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

Setting SSCOs is mandatory for all European Union member states and must be set for all habitats listed in Annex I of the Habitats Directive and species of Annex II in each Natura 2000 site designated for conservation of habitats and non-bird species.

SSCOs are determined based on the guidelines by the European Commission (2012), which are detailed for the national use in Latvia in the national methodology (2019, 2022) and are available here.

Standardized and unified approach is used to set SSCOs. Objectives are displayed as **quantitative, measurable result that describes the desirable cover and condition of the habitat.** The objectives indicate specific needs to be achieved and specify to what extent they should be achieved in each Natura 2000 site to reach favourable conservation status – the core objective of both Habitats and Birds Directives.

Each objective includes two components:

(a) **the target cover that must be preserved or achieved**—the target cover almost always includes the current (to be preserved) cover and the potential cover of the habitat identified by evaluating the landscape potential (if any) using certain criteria (to be restored or re-created);

(b) **target condition**—habitat "needs" expressed in a standardized way for the particular site; the target condition derives from the current habitat condition (to be preserved or improved, or re-created), which, in turn, is affected by various impacts in the past and present, the effectiveness of conservation actions, etc. that mirror into the habitat condition assessment.

The **management activities to reach the specified targets** are described in detail in the Natura 2000 site management plans or in some cases stated in other legislative acts. Development and updating of the site management plans is a continuous process and should also include review and update of the SSCOs, if applicable (e.g. by linking them to what has already been done to achieve the previously set objectives). However, updating the SSCOs, if they are still rooted in the best available data, is not necessary—in many cases, the objectives will likely be relevant for a longer period.

Data The best available data on the cover of habitats and the standardized data forms for each habitat patch were acquired from the national biodiversity database "Ozols" (data from 2023) and used in determining SSCOs. In setting SSCOs, the most comprehensive habitat inventory in Latvia so far—the country-scale inventory carried out during the project "Preconditions for Better Biodiversity Preservation and Ecosystem Protection in Latvia" (Nature Census, 2017–2023) were used. In order to assess the current condition of the habitats and, on the basis of that, determine the target condition, within the scope of this work, special algorithms were developed. They are mostly based on selected statistically significant parameters, using statistical data analysis. If the development of an algorithm for a certain habitat type was not possible for some reason, an expert judgment based on the best available data and knowledge was applied. Full methodology and data sources available here.

Conservation Objectives for:

Natura 2000 site code	LV0302100
Natura 2000 site name	**Abavas senleja**
Additional information about the site	https://www.daba.gov.lv/lv/abavas-senleja
Qualifying Interests **EU habitat types,** including potential EU habitat types * indicates a priority habitat under the Habitats Directive	*2180 Coastal wooded dunes* *3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation* *5130 Juniper formations on heaths or calcareous grasslands* *6120* Xeric sand calcareous grasslands (* indicates priority habitat)* *6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)* *6270* Fennoscandian lowland species-rich dry to mesic grasslands* *6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils* *6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels* *6450 Northern boreal alluvial meadows* *6510 Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)* *6530* Fennoscandian wooded pastures* *7110* Active raised bogs* *7160 Natural dystrophic lakes and ponds* *7220* Petrifying springs with tufa formation (Cratoneurion)* *7230 Alkaline fens* *8210 Calcareous rocky slopes with chasmophytic vegetation* *8220 Siliceous rocky slopes with chasmophytic vegetation* *8310 Caves not open to the public* *9010* Western taiga* *9020* Fennoscandian herb-rich forests with Picea abies* *9050 Coniferous forests with Picea spp.* *9070 Fennoscandian wooded meadows* *9080* Tilio-Acerion forests of slopes, screes and ravines* *9160 Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli* *9180* Fennoscandian rocky forests* *91D0* Bog woodland* *91E0* Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* *91F0 Riparian mixed forests of Quercus, Ulmus and Fraxinus in larger river floodplains (potentially)*
Qualifying Interests **EU species types**	*Plants:* *Agrimonia Pilosa (1939)* *Buxbaumia viridis (1386)* *Invertebrates:*

	Euphydryas aurinia (1065) *Euphydryas maturna (6169)* *Graphoderus bilineatus (1082)* *Leucorrhinia pectoralis (1042)* *Lycaena dispar (1060)* *Ophiogomphus Cecilia (1037)* *Osmoderma eremita (1084)* *Unio crassus (1032)* *Vertigo angustior (1014)* *Vertigo geyeri (1013)* *Amphibians and reptiles:* *Triturus cristatus (1166)* *Mammals:* *Lutra lutra (1355)* *Myotis dasycneme (1318)* *Fish:* *Aspius aspius (1130)* *Cobitis taenia (1149)* *Cottus gobio (1163)* *Lampetra fluviatilis (1099)* *Lampetra planeri (1096)* *Misgurnus fossilis (1145)* *Rhodeus amarus (5339)* *Sabanejewia baltica (1146)* *Salmo salar (1106)*
Experts involved in setting of the SSCOs:	Brigita Laime (coastal areas, sand dunes, and heaths) Lauma Vizule-Kahovska (freshwater habitats) Agnese Priede, Baiba Galniece (grasslands and scrublands) Anita Namatēva, Agnese Priede (mires and springs) Dainis Ozols (caves) Sandra Ikauniece (forests) Linda Uzule (plants) Maksims Balalaikins (invertebrates-beetles, dragonflies, butterflies), Digna Pilāte (invertebrates-snails) Valdis Pilāts (mammals) Kaspars Abersons (fish) Andris Čeirāns (amphibians and reptiles)
Work completion date	31.08.2023.

EU habitat types, including potential EU habitat types	**Site specific conservation objective**	**Comments on the target values**
Coastal areas, sand dunes, and heathland *2180 Coastal wooded dunes*	2180: the target habitat area is 45,96 ha.	The target area is equal to the current area.
Freshwater habitats *3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation*	3260: the target habitat area is 240,64 ha.	The target area is equal to the current area.
Grasslands and shrublands *5130 Juniper formations on heaths or calcareous grasslands* *6120* Xeric sand calcareous grasslands (* indicates priority habitat)* *6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)* *6270* Fennoscandian lowland species-rich dry to mesic grasslands* *6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils* *6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels* *6450 Northern boreal alluvial meadows* *6510 Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)* *6530* Fennoscandian wooded pastures*	5130: the target habitat area is 4,36 ha.	The target area is equal to the current area.
	6120*: The target habitat area is 65,07 ha and is larger than the current area.	6120*: The target habitat area includes both current habitat areas and potential 6120 habitat areas—grasslands mapped as potential habitat of EU importance according to data from the "Nature Survey" (2017-2023) and areas restored in the GrassLIFE project "Restoring Grasslands and Promoting Their Diverse Use" (LIFE16NAT/LV/262, 2017-2023), which have a target habitat of 6120*.
	6210: The target habitat area is 560,14 ha and is larger than the current area.	6210: The target habitat area includes both current 6210 habitat areas and potential 6210 habitat areas—grasslands mapped as potential habitat of EU importance according to the "Nature Survey" (2017-2023). It also includes areas adjacent to the current EU importance grassland and/or areas currently declared as permanent grasslands in the LAD system (code 710), as

		well as old grasslands currently overgrown but adjacent to existing EU importance grasslands. Potential areas were also determined based on data from the Cohesion Fund project "Implementation of Management Measures in Specially Protected Natural Areas and Micro-reserves to Improve the Conservation Status of Habitats and Species" (2021-2023), and areas grazed by the mobile herd of the GrassLIFE project, including planned restoration areas from the GrassLIFE2 project "Restoration of Priority EU Importance Grassland Habitats and Promotion of Their Diverse Use" (101073829/LIFE21NAT/LV/, GrassLIFE2, 2023-2028).
	6270*: The target habitat area is 214,99 ha and is larger than the current area.	6270*: The target habitat area includes areas mapped as potential habitat of EU importance grasslands and those adjacent to the current EU importance grassland and/or areas declared as permanent grasslands in the LAD system (code 710). It also includes areas restored in the GrassLIFE project "Restoring Grasslands and Promoting Their Diverse Use" (LIFE16NAT/LV/262, 2017-2023), which have a target habitat of 6270*.

	6410: The target habitat area is 38,96 ha and is larger than the current area.	6410: The target habitat area includes both current habitat areas and potential 6410 habitat areas—grasslands mapped as potential habitat of EU importance according to the "Nature Survey" (2017-2023).
	6430: The target habitat area is 5,21 ha.	The target area is equal to the current area.
	6450: The target habitat area is 99,97 ha and is larger than the current area.	6450: The target habitat area includes current 6450 habitat areas and an area identified as 6450 habitat after the data analysis from the NAT-PROGRAMMA project, which is adjacent to existing EU importance grasslands in the Abava floodplain.
	6510: The target habitat area is 65,34 ha and is larger than the current area.	6510: The target habitat area includes current 6510 habitat areas and grasslands mapped as potential habitat of EU importance according to the "Nature Survey" (2017-2023). It also includes areas restored in the LVAF project "Restoration of Natural Grasslands in Abava Valley Nature Park in Kandava Municipality."
	6530*: The target habitat area is 22,16 ha.	The target area is equal to the current area.
Bogs and Springs *7110* Active raised bogs* *7160 Natural dystrophic lakes and ponds* *7220* Petrifying springs with tufa formation (Cratoneurion)* *7230 Alkaline fens*	7110*: The target habitat area is 9,08 ha.	7110*: The raised bog located within the “Čužu Purvs” nature reserve (3.2 hectares) is developing into a boggy forest (potentially 91D0*) through natural succession. It is not feasible to maintain it as an open raised bog in the long term. Over a period

		exceeding 20-30 years, the 7110* habitat area could decrease due to unavoidable natural succession.
	7160: The target habitat area is 15,13 ha.	The target area is equal to the current area.
	7220*: The target habitat area is 5,12 ha.	The target area is equal to the current area.
	7230: The target habitat area is 9,89 ha.	The target area is equal to the current area.
Rock Outcrops and Caves *8210 Calcareous rocky slopes with chasmophytic vegetation* *8220 Siliceous rocky slopes with chasmophytic vegetation* *8310 Caves not open to the public*	8210: The target habitat area is 0,32 ha and is greater than the current area.	In seven outcrops located on slopes that are less prone to erosion, there is a slow accumulation of debris and vegetation over the base areas. To restore these outcrops, recent debris and overgrown sections need to be cleared.
	8220: The target habitat area is 1,18 ha and is greater than the current area.	In seven outcrops located on slopes with low erosion risk, there's slow accumulation of debris and overgrowth at the base. Restoration efforts should focus on clearing these overgrown and debris-filled areas.
	8310: The target habitat area is 0,00617 ha and is greater than the current area.	In one cave (Abavas Velnala), the entrance has partially collapsed due to debris accumulation. To restore the cave's previous area, the entrance must be cleared of fallen and washed-in material.
Forests *9010* Western taiga* *9020* Fennoscandian herb-rich forests with Picea abies* *9050 Coniferous forests with Picea spp.* *9070 Fennoscandian wooded meadows* *9080* Tilio-Acerion forests of slopes, screes and ravines* *9160 Sub-Atlantic and medio-European oak or*	9010*: The target habitat area is 661,15 ha. The target habitat area is greater than the current area.	When establishing target areas for forest habitats, plots were assessed and identified as potential EU priority forest habitats. This evaluation was based on existing information and additional considerations, with projections suggesting that, over the next 20–30 years, these areas could evolve into forest habitats meeting minimum EU habitat quality criteria. To ensure these targets are met, it is crucial to
	9020*: The target habitat area is 9,51 ha. The target habitat area is greater than the current area.	
	9080*: The target habitat area is 13,50 ha. The target habitat area is greater than the current area.	
	9160: The target habitat area is 16,69 ha. The target habitat	

oak-hornbeam forests of the Carpinion betuli *9180* Fennoscandian rocky forests* *91D0* Bog woodland* *91E0* Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* *91F0 Riparian mixed forests of Quercus, Ulmus and Fraxinus in larger river floodplains (potentially)*	area is greater than the current area.	implement the requisite protection or management regimes. Generally, in forests, this means allowing natural succession without human intervention. However, specific habitat types might require specialized management practices to enhance structural quality or species composition.
	9180*: The target habitat area is 396,72 ha and is greater than the current area.	
	91D0*: The target habitat area is 302,65 and is greater than the current area.	
	91E0*: The target habitat area is 37,48 ha. The target habitat area is greater than the current area.	
	9050: The target habitat area is 90,21 ha.	The target area is equal to the current area.
	9070: The target habitat area is 5,17 ha.	The target area is equal to the current area.
	91F0 (potential)	Currently, this habitat type is not found in the area, but zones have been identified where the specific forest habitat could develop with a non-intervention management regime.

EU species types	**Site specific conservation objective**	**Comments on the target values**
Plants *Agrimonia Pilosa (1939)* *Buxbaumia viridis (1386)*	Agrimonia Pilosa: the target species population is 623 individuals.	The target population is almost 2x larger than the current population. The main threatening factors are excessive shading through overgrowth of habitats with trees and shrubs, as well as excessive anthropogenic impact (deforestation, intensive logging).
	Buxbaumia viridis: the target species area is 49,38 cm^2.	The target area is almost 2x larger than the current area. For the favourable conservation of the *Buxbaumia viridis*, a non-interference regime is necessary.

Invertebrates *Euphydryas aurinia (1065)* *Euphydryas maturna (6169)* *Graphoderus bilineatus (1082)* *Leucorrhinia pectoralis (1042)* *Lycaena dispar (1060)* *Ophiogomphus Cecilia (1037)* *Osmoderma eremita (1084)* *Unio crassus (1032)* *Vertigo angustior (1014)* *Vertigo geyeri (1013)*	Euphydryas aurinia: the target species population is 232 individuals.	The target population is equal to the current population. Management measures such as mowing or low-intensity grazing are needed to ensure the sustainability of the existing habitats. If these measures are not implemented, bush cutting should be provided once every five years.
	Euphydryas maturna: the target species population is 169 individuals.	The target population is equal to the current population. Regular mowing of the ecotone and removal of shrubs at least every 5 years is necessary for the sustainable conservation of the species' habitat. The Aspen and Ash understorey and individual trees up to 1.5 metres in height should be kept.
	Graphoderus bilineatus: the target species population is 113 individuals.	The target population is equal to the current population. There is a need to develop a specific methodology for inventorying the species (so far the D. latissimus approach has been used).
	Leucorrhinia pectoralis: the target species population is 2312 individuals.	The target population is equal to the current population.
	Lycaena dispar: the target species population is 1232 individuals.	The target population is equal to the current population. The species benefits from regular management of the habitat - mowing or grazing in early or late summer, when no butterfly caterpillars, eggs or pupae are present on the plants. Intensive habitat management activities have a negative impact on the development of butterfly caterpillar.

	Ophiogomphus Cecilia: the target species population is 678 individuals.	The target population is almost 10x larger than the current population.
	Osmoderma eremita: the target species area is 11 grid 1x1.	The target area is equal to the current area. Mapping of trees of target species importance (category 3 to 7 trees) is required in all 1 x 1 km grid squares where the species is known to occur, and no tree mapping has been carried out to date.
	Unio crassus: the target species population is 89936 individuals.	The target population is almost 2x larger than the current population.
	Vertigo angustior: the target species population is 13050000 individuals.	The target population is equal to the current population. Before planning the management of a habitat suitable for a species, it is first necessary to check the presence of the species using area-unit based approach. Management measures should be coordinated with an expert.
	Vertigo geyeri: the target species population is 2945800 individuals.	The target population is 2x larger than the current population. Before planning the management of a habitat suitable for a species, it is first necessary to check the presence of the species using area-unit based approach. Management measures should be coordinated with an expert.
Amphibians and reptiles *Triturus cristatus (1166)*	Triturus cristatus: the target species population is 5521 individuals.	The target population is almost 20x larger than the current population.
Mammals *Lutra lutra (1355)* *Myotis dasycneme (1318)*	Lutra lutra: the target species population is 47 individuals.	The target population is larger than the current population.

	Myotis dasycneme: the target species population is 94 individuals.	A method needs to be developed to obtain the number of individuals from the activity index.
Fish *Aspius aspius (1130)* *Cobitis taenia (1149)* *Cottus gobio (1163)* *Lampetra fluviatilis (1099)* *Lampetra planeri (1096)* *Misgurnus fossilis (1145)* *Rhodeus amarus (5339)* *Sabanejewia baltica (1146)* *Salmo salar (1106)*	Aspius aspius: the target species area is 152 ha.	The target area is equal to the current area. A specific study based on environmental DNA analysis would be needed to assess the distribution of the species.
	Cobitis taenia: the target species area is 197 ha.	The target area is equal to the current area. The unit for setting conservation objectives for a species is the area of waters inhabited by the species; the most effective method for assessing achievement of the objective is environmental DNA analysis.
	Cottus gobio: the target species area is 238 ha.	The target area is almost 2x larger than the current area. The unit for setting conservation objectives for a species is the area of waters inhabited by the species; the most effective method for assessing achievement of the objective is environmental DNA analysis.
	Lampetra fluviatilis: the target species population is 4240272 individuals.	The target population is larger than the current population. It is necessary to monitor the density of individuals, primarily in all the largest and most important SPAs for the river lamprey - Venta, Abava and Salaca valleys, Gauja National Park, etc.
	Lampetra planeri: the target species area is 81,53 ha.	The target area is equal to the current area. Currently, the most potentially effective method is environmental DNA analysis.
	Misgurnus fossilis: the target species area is 71 ha.	The target area is equal to the current area. The most effective method for assessing the presence of this species in the waters

		concerned is environmental DNA analysis.
	Rhodeus amarus: the target species area is 210 ha.	The target area is equal to the current area. The most effective method for assessing the presence of this species in the waters concerned is environmental DNA analysis.
	Sabanejewia baltica: the target species area is 218 ha.	The target area is equal to the current area. A special analysis based on environmental DNA is needed to specify the distribution.
	Salmo salar: the target species population is 69373 individuals.	The target population is almost 170x larger than the current population. Stock assessments of the species, both at the level of river populations and at national level, are carried out as part of the data collection programme. Additional data collection may be necessary if this programme is discontinued or if the resources available for this programme are significantly reduced.