

Introduction

The **Mugurve Meadows** Nature Reserve (area code 5288) was established in 2004 (CM Regulation No. 266/ 08.04.2004), and it covers an area of 317 ha. The reserve was established to preserve Annex I habitats 6450 Northern Boreal alluvial meadows, 6510 lowland hay meadows, 6530* Fennoscandian woodland meadows, and 91F0 riparian mixed broadleaf forests in river floodplains of the EC Habitats Directive; Annex II invertebrate species the hermit beetle *Osmoderma eremita* of the same Directive, and the corncrake *Crex crex* and other 17 bird species listed in Annex I of the Birds Directive. The nature reserve encompasses open and partially overgrown meadows in floodplains of the Pededze and the Mugurve Rivers, forest fragments, and ox-bows. Most of the nature reserve is situated on private land.

Following the criteria of both the Birds and the Habitats Directives, the nature reserve has been listed as a Natura 2000 site. Together with the Sita and Pededze Floodplains Nature Reserve they form the Sita and Pededze River Junction Special Bird Area (code LV055).

The management plan has been developed as part of the project LIFE04NAT/LV/000198 Restoration of Latvian Floodplains for EU Priority Species and Habitats. The management plan is developed by the Latvian Fund for Nature, and in compliance with the Ministry of the Environment Order No. 120/04.07.2002 on Recommendations for Drawing Management Plans.

The following inventories took place in the process of drawing the management plan:

- Habitats of Annexes I and plant species of Annex II of the Habitats Directive (Lelde Eņģele);
- Specially protected habitats and plant species (Lelde Eņģele);
- River habitats and aquatic invertebrates (Mārtiņš Kalniņš);
- Woodland key habitats (Nikolajs Brīvība);
- Invertebrates (Kristaps Vilks);
- Bird counts (Aivars Petriņš, Ainārs Auniņš).

Baiba Strazdiņa was cartography expert; development of the management plan was supervised by Liene Salmiņa.

To mark the inception of the management plan development, a meeting was called in the Stradi parish on 18 February 2005. The meeting was attended by 37 stakeholders (see Annex I). A survey was carried out during the meeting (see Annex I), which demonstrated that in the future all owners would be interested to manage their meadows even though some do not perform any activities there at this time.

The following members of the supervisory board were appointed during the meeting: Gundega Freimane, Deputy Head of the Species and Habitats Section, the Nature Protection Board; Anna Vīgante, Head of the Stradu Parish Council; Gunārs Ciglis, Head of the Litene Parish Council; Aija Supe, inspector of the Nature Protection Unit, Madona Regional Environmental Board of the State Environment Service; Kaspars Liepiņš, environmental expert, East Vidzeme Forest District, State Joint Stock Company Latvian State Forests; Ilgvars Jačuks, forest warden, Litene Forest District, Gulbene Regional Forest District, the State Forest Service; Santa Zelča, forest warden, Stradu Forest District, Gulbene Regional Forest District, the State Forest Service; Ainārs Auniņš, Coordinator for the LIFE-Nature project Restoration of Floodplain Meadow; Eduards Kokorevičs, representative of the Stradu parish landowners; Verners Pudāns, representative of the Stradu parish landowners.

The first meeting of the supervisory board took place on 29 August 2005 in the Stradu parish and it was attended by 15 people (see Annex II). The second

meeting of the supervisory board took place on 18 October 2005, and it gathered 14 participants (see Annex III). To discuss forest management within the nature reserve, all of the landowners were invited to attend the second board meeting. The public information meeting on the management plan took place on 24 November 2005, and it was attended by 17 people (see Annex IV).

The management plan was approved by both the Stradu Parish Council and the Litene Parish Council 30 November 2005 (see Annexes V and VI). The management plan was approved by the supervisory board during its last meeting on 20 December 2005 in the Stradu primary school (see Annex VII).

Summary

The nature reserve was established in 2004; it covers 317 ha of land and encompasses a part of the Pededze River valley. Together with the Sita and Pededze Floodplains Nature Reserve and the Lower Reaches of the Pededze River Nature Reserve it forms a unified hydrological system; natural processes there are highly dependent on appropriate functioning of the Pededze River and its tributaries.

Nature conservation priorities for the nature reserve have been established taking into account the frequency of specially protected habitats and species in the country and elsewhere in Europe. The highest priority is given to species and habitats that are either rare or locally positioned (typical for the East Latvia Lowland), or are annexed in the Birds and Habitats directives. Those include the following:

- Birds nesting in meadows,
- River floodplain meadows,
- Woodland meadows,
- Hermit beetle,
- Woodland key habitats – old broadleaf forests,
- Individual old oak trees.

The biological value of the territory is demonstrated by the fact that it is listed as a Natura 2000 site. There are 7 habitats found in the Habitats Directive Annex I and 4 invertebrate species found in the Habitats Directive Annex II registered in the nature reserve; additionally, there is one species of vascular plants, 2 mammal species of Annex IV of the Habitats Directive, and 18 bird species of Annex I of the Birds Directive.

The reserve also hosts 31 specially protected species in Latvia: 5 plant, mushroom and lichen species, 7 invertebrates, 18 bird and one mammal species. The nature reserves has 4 exceptionally large oak trees, 23.9 ha of woodland key habitats, and 4 types of specially protected habitats in Latvia.

The hydrological regime of the reserve and subsequently the continuity of its nature values was negatively affected by straightening of the Mugurve River and amelioration works in the reserve in the mid and late 20th century. Decrease in the intensity of the Pededze River flow below the hydro-power station (HPS) can most likely be attributed to the HPS, which was built in the Jaunanna parish in 2001. Meadows and meadow species have been negatively affected by discontinuation of management practices at the end of last century.

Reestablishing management of the meadows has been fostered by the availability of subsidies from the Rural Support Service's program for Preservation of Biodiversity in Grasslands. Activities carried out in the framework of the project for Restoration of Floodplain Meadows in Latvia have also triggered landowner's interest in meadow management. Most of the Mugurve meadows have been mown this year; individually growing oak trees are being cleared of bushes and small trees surrounding them.

The management plan prescribes the following priority management activities: restoration and mowing of meadows, maintenance of woodland key habitats, counting of protected birds nesting in the meadows, and public awareness raising activities.

The long-term or the ideal objective set for the management of the site would be achieved when the landscape in the reserve is dominated by open floodplain meadows, with presence of woodland meadows, old broadleaf forests, individually situated old oak trees, and specially protected plant and animal species; sustainability

of meadow management would also be indicated by the landowners' willingness to engage in management activities.