

DVIETE LIFE

Demonstrates and promotes the use of complex Corncrake habitat restoration techniques (e.g. contract solutions) in degraded floodplain meadows, as well as raises the level of knowledge and involvement of landowners and local authorities in the environmentally friendly management of the Dviete floodplain.



Summary

LIFE+ project "Restoration of Corncrake habitats in Dviete floodplain Natura 2000 site " 2010-2015

The Nature Park and Natura 2000 site 'Dviete floodplain' was established in 2004 and covers an area of 4,989 hectares. It is one of the largest and best-preserved functioning river floodplains, and one of the most important breeding areas of the Spotted Crake, Corncrake and Great Snipe in Latvia. It is also a globally important stop-over site for waterfowl during spring migrations. The area and biological quality of Dviete floodplain grasslands have been remarkably decreased by alteration of the hydrological regime during the 20th century. Drained and abandoned grasslands overgrown with bushes, becoming unsuitable for the breeding of the Corncrake and other protected grassland bird species. Some measures have been taken to improve the conservation status of Corncrake (*Crex crex* in Latvia). For example, the straightened section of the river Dviete with a length of about 2 km has been restored in its natural hydrological regime of the flood plain favourable to the corncrake, by preventing overgrowth of the surrounding grassland and to increase the common biodiversity of the flood plain. Shrubs and trees on an area of at least 100 ha were removed in cooperation with the landowners to restore the corncrake's habitats - open floodplain grasslands. By removing shrub barriers, a continuous area of approximately 300 ha of corncrake habitat was restored. The contracts were signed in the project for the restoration of the meadows and grazing of biologically valuable grasslands.



Dviete floodplain landscapes before and after restoration of grasslands (24.05.2011. and 22.10.2015). Photo: E. Račinskis

Objectives

- Restoration of a straightened section of the Dviete River to its natural bed above Lake Skuķu to improve the hydrological conditions of the floodplain and prevent overgrowth of the meadows while restoring the historical floodplain landscape;
- Restoration of floodplain grasslands by cutting shrubs and trees overgrown with them;
- Establishment of grazing areas for cattle and horses in restored floodplain meadows for their subsequent maintenance in a state suitable for meadow birds

LAND TENURE



Land tenure after the implementation of a LIFE+ restoration project.

PUBLIC GOODS



Farmland biodiversity (Corncrake habitat)



Landscape and scenery
Dviete floodplain nature park, restoration of the hydrological regime of the meliorated floodplain.

LOCATION

COUNTRY



Iļukste and Jekabpils counties, Selija region, the south east part of Latvia

CONTRACT

It is a public-private-civil society contract (EU, landowners, Latvian Fund for Nature (LFN), Dviete Valley Parish Association)



Contract conclusion:
Written agreement



Funding/Payments:

The project was co-funded by EC LIFE+ programme and Latvian Environmental Protection Fund



Duration of LIFE+ project
2010 – 2015

Length land lease agreements for

maintenance: Initially, the contracts were for a period of 4-5 years, now for 10 years

Problem description

During the 20 century, natural values of the Dviete floodplain suffered from the straightening of watercourses, drainage of wetlands, intensification of agriculture and later also the abandonment of grasslands. Parts of Dviete floodplains of former grasslands are overgrown with shrubs and trees, losing their importance to both grassland birds and migratory waterfowl. Shortly after the creation of the Dviete Floodplain nature park, a nature protection plan for the site was developed in 2005 as part of the LIFE project "Restoration of Latvian floodplain meadows for the conservation of EU priority species and habitats" (LIFE04NAT / LV / 000198; 2004-2008). One of the objectives of the plan was to restore the hydrological regime of the drained floodplain. This included restoring river bends in the floodplain following existing stretches of old riverbeds, and gradual downstream restoration. After the implementation of the project, the area needs to be agriculturally maintained under consideration of environmental aspects.

Data and Facts – Contract

Participation: 27 landowners are involved in this contract solution.

Area of implementation: The Dviete River is located in the southeastern part of Latvia with a total length of 37 km. Most of the river's flow (about 20 km), is located in Dviete ancient valley and Dviete floodplain nature park, and the water level and the area of flooded areas during the floods are determined by the biggest river of Latvia -Daugava.

Involved parties: The confirmation for the technical project by landowners- one of the most difficult stages of a project. This was done the company contracted by the LIFE project coordinator and landowners. The next stage contracts are for the restoration of the meadows along the river.

The grassland restoration contracts between the Latvian Fund for Nature (LFN) and the landowners who carried out the grassland restoration included the requirement to maintain the restored areas. The farmers got reimbursed for their activities. In addition, land lease agreements or agreements on "grazing of biologically valuable grasslands" have been concluded between the Dviete Valley Parish Association and the landowners for grazing management. These contracts cover both grassland areas restored to pasture land within the framework of the LIFE + project DVIETE and areas pastured before the LIFE + project. Currently, contracts cover an area of 371 ha. Land leases have different periods of operation because they are not concurrent. Initially, the contracts were for 4-5 years, now for 10 years. When the cooperation agreement expires, a new contract is negotiated between the owner of the land and Dviete Valley Parish Association (DVPA).

There is an agreement between LFN and DSPA to maintain the results of the LIFE + project DVIETE. Under the agreement, DSPA commits itself organizing and implementing, over the next 20 years (until 30 September 2035), measures to maintain project results in restored grasslands managed by DSPA.

Location: The Dviete River is located in the southeastern part of Latvia, on the left bank of the Daugava (in Augšzeme), in the territories of Ilūkste and Jēkabpils municipalities. It has a total length of 37 km and a fall of 49 m (1.32 m / km; Pastors 1995). Most of the river's flow (about 20 km), from Kaldabruņa to the mouth of the river Daugava, is located in Dviete ancient valley and Dviete floodplain nature park. This part of the valley includes the Dviete and Skuķu lakes, as well as the lower Ilūkste floodplain. Riverbeds in the nature park have been historically regulated several times (Indriksons 2008) during the melioration in the 20th century. Dviete and its riverbed Ilūkste form part of the largest natural floodplain system in Latvia, which affects the Daugava floodplains, their volume and duration (Škute et al. 2008). The hydrological regime of Dviete floodplain, the water level and the area of flooded areas during the floods are determined by the Daugava (Gruberts 2004, 2015). Floodplain floods are mainly due to floodwaters flowing into the river Dviete upstream from the Daugava.

Requirements for farmers: Do not damage or destroy (also by plowing or cultivating) floodplain and terrace meadows, drain wetlands, no reforestation by planting or sowing and afforestation or not allowing natural afforestation of agricultural land, only- restorative mowing and grazing.

Controls/monitoring:

- Corncrake habitats
- Plants monitoring
- Hydrological monitoring

Risk/uncertainties of participants: The project also showed that small and fragmented land properties can make large-scale management difficult. The main disadvantage of the LIFE + DVIETE project in terms of cooperation with landowners was the fact that no written support agreements for the implementation of the project activities were already in place during the project preparation. Instead, the project team made the mistake of relying on the good faith that most of the landowners in the Dviete floodplain were (and will continue to be) supportive to the project's intentions. However, the bitter experience of subsequent events has shown that one landowner who refuses to cooperate may be sufficient to significantly influence the course and outcome of the project.

It is important to note that the technical project for river restoration developed by the LIFE + project DVIETE also includes a separate appendix, which was not renewed due to one landowner. Since the original technical design for the restoration of the river's natural stretch of 2.3 km also included this fragment in full, further efforts to fill this unfinished gap would benefit from the work already done. The main planned restoration work for the alternative route is as follows: length 600 m, excavation of the bed 2263 m³, two/bed embankments (240 m³) and construction of one reinforced beam.



Context features

Landscape and climate: After the restoration of the Dviete River section above Skuķu Lake, the landscape of the floodplain has changed significantly. The river is partly restored into its historic curves and, together with the open grasslands restored under the LIFE + project DVIETE, and regained its former shape when the floodplain was used for traditional agriculture - mowing and grazing.

Farm structure: As a result of the project activities, the landscape of the Dviete floodplain has undergone significant changes, and monitoring of breeding corncrakes indicated that their population in the project area was on the increase. For the restoration of grasslands in similar floodplain areas it is recommended to implement a complex of restoration measures used in the LIFE + project DVIETE - shrub and tree felling, stump milling and grazing, varying the proportion of each operation as necessary.

There are still quite several active farms in the area, mainly on the banks of the Dviete Valley and the Ilukste Valley, which are engaged in livestock farming. The largest livestock herdsman here are the Zemgale Ltd and Skaidrite cooperative societies in Pilskalnes parish, the Bebrene vocational secondary school in Bebrene and the farm Mežare in Rubene parish. These farms use the Dviete floodplain meadows for both mowing and grazing livestock.

In the Dviete parish's south-eastern part (Sosnovka), on the terrace of the headwaters of the Daugava between the lower reaches of Ilukste and the Daugava there are large fields used for cereal production and attracting large numbers of migrating geese every year. Potatoes, fodder beets, etc. vegetables also are grown in small areas near the villages and farmsteads of Dviete and Bebrene. Elsewhere, floodplain meadows are mainly used for hay mowing.

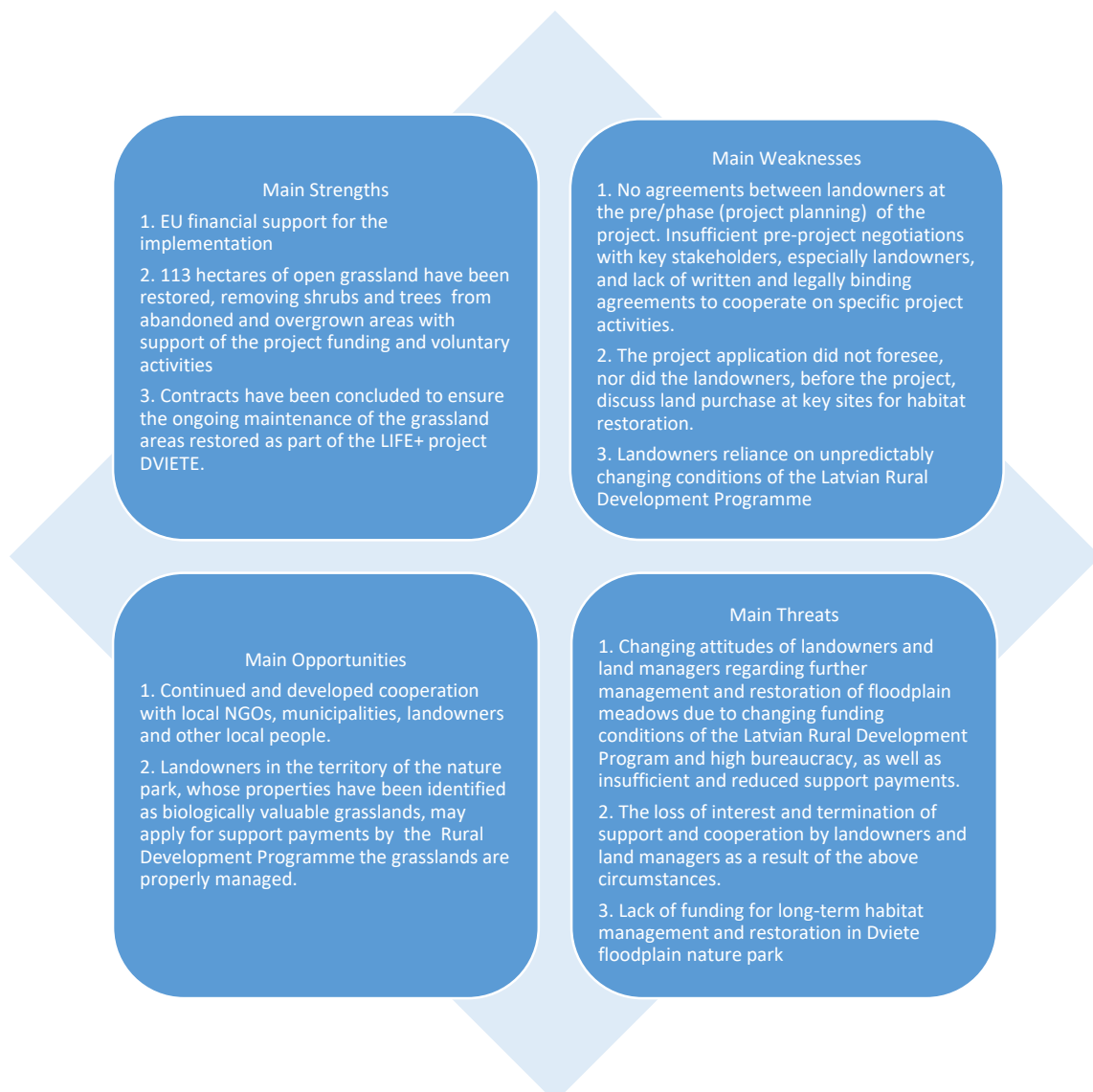
Although most of the area is privately owned, some of the land is also owned by municipalities. A small part of municipal land is leased to local people for agricultural purposes, but most of it is currently unmanaged.

SUCCESS OR FAILURE?



Showcase of success and failure. The future of Dviete floodplain grasslands, as in other parts of Latvia, is largely dependent on the amount of RDP funding available - the amount of the support payment and the conditions for maintaining biodiversity on grasslands along with access to other payments (eg. single area payment), as well as support opportunities for other economic activities (rural tourism, organic farming) that promote the existence of viable farms. Unfortunately, the conditions for these payments and the amount of aid are very variable.

SWOT analysis



Main external factors influencing success

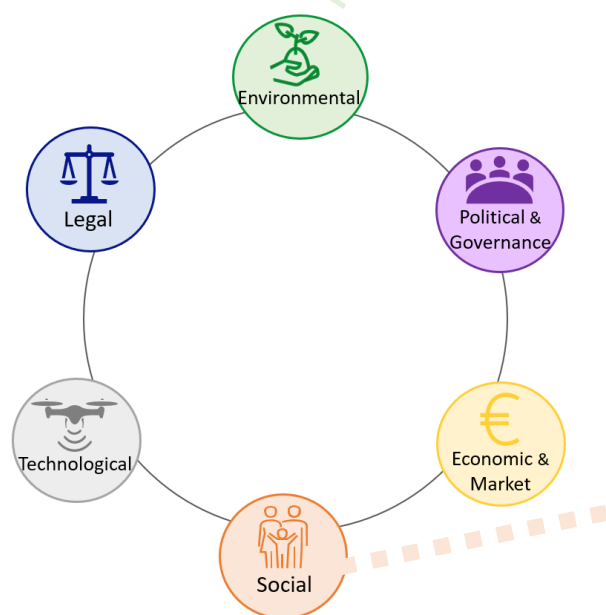
Political/governance, economic/market, social, technological, legal and environmental factors can all have a strong impact on the success of contract solutions. In this case study an in-depth analysis found that the following, selected factors were of specific importance.



Historical transformation of the nature and the consequences:

During the 20th century, rivers were straightened, deepened and dammed in order to use more land for agriculture. Latvian rivers have also been partially transformed (about 36% of rivers are regulated), with negative consequences for biodiversity and weakening of ecosystem functions in wetlands, including floodplains.

➔ **The Dviete floodplain is a particularly valuable area that has also suffered from river network transformation and drainage** ➔ An environmental condition that requires action. An area management plan from 2005 already foresaw the restoration of the meadows covered with shrubs and the reduction of the adverse effects of drainage on the landscape and the biodiversity of the floodplain.



Timely information and involvement of landowners:

The experience of the LIFE + project DVIETE has shown that timely information and involvement of landowners in the planning and implementation of nature management activities is crucial.

Even with relatively few land properties could happen that cooperation is impossible.

➔ At least part of the problem could be solved by the agreements with the landowners already made before the start of the project on the implementation of the measures planned in the project.

Developments in the Program since 2020:

Activities in the Dviete floodplain have been implemented according to the After-LIFE Conservation Plan.

- So far, the management of the restored open grasslands of the site continues mainly by grazing (still provided by landowners who have contracts with the association). There are intentions for further maintenance work and territory development in the future.
- The contracts for the restoration of grasslands between the LNF and the landowners included requirements to maintain the restored areas, which are also being fulfilled.
- Dviete floodplain Information centre is still carrying out educational activities.
- The Dviete floodplain observation platform is maintained by Ilukste municipality.