



LIFE to GRASSLANDS

Layman's report



Dear Reader,

Nature goes beyond the division of traditional sectors and openly invites the cooperation of everyone involved in biodiversity, natural values and management of renewable natural resources.

Nature is the care and responsibility of us all – both as individuals as well as any form of organised society, domestically and globally.

Only through networking and cooperation can we create a cultural attitude towards Nature that enables maintaining an economically and environmentally sustainable existence. The LIFE TO GRASSLANDS project is a good example of cooperation, understanding and consideration, aiming to build a better future based on preserved nature.

Naturally, the credit goes to all who have participated in the challenging and important project activities, and I share the positive feelings of a job well done.

Teo Hrvoje Oršanič, MSc.
ZRSVN, Director

The LIFE TO GRASSLANDS project took on the challenge of conservation of species-rich grasslands and tall tree meadow orchards in agricultural land. We set many goals. We had good cooperation with our partners and associates, where we would listen to each other and search for solutions as a group. We achieved and often even exceeded all the planned goals. Thank you all.

Nika Debeljak, PhD.
Project Manager

ABOUT THE PROJECT

Preserving biodiversity in agricultural land is one of the key environmental challenges we are facing in Europe as well as globally. Extensive grasslands are one of the most endangered ecosystems, because their existence depends on continuous human activity, namely sustainable and moderate use of the land. At the same time, these are very diverse areas, but unfortunately their value often remains unnoticed.

In the project **Conservation and Management of Dry Grasslands in Eastern Slovenia**, in short **LIFE TO GRASSLANDS (ŽIVLJENJE TRAVIŠČEM)**, we aimed to improve the conservation status and to ensure long-term management of two species-rich grassland habitat types and the dependant plant and animal species in the four project subareas (PSA): Haloze, Pohorje, Kum and Gorjanci, which are also identified as Natura 2000 sites.

The project was run by the Institute of the Republic of Slovenia for Nature Conservation, together with partners. They were: Agriculture and Forestry Institute Ptuj, Rural development centre PRJ Halo, Society Gorjanske košenice and the Local community Dobovec.

The LIFE TO GRASSLANDS project aims to improve the conservation status of two grassland habitat types that are important at the European level:

- Species-rich *Nardus* grasslands (*Nardus stricta*), on siliceous substrates in mountain areas (HT 6230*) in PSA Pohorje and
- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) (HT 6210 (*)) in PSA Haloze, Kum and Gorjanci.

Since they are exceptional and endangered, both habitat types are listed among the habitat types of EU Importance in Annex I of the Habitat Directive. These are so-called targeted habitat types that need to be preserved with priority. The conservation status of both habitat types was reported as unfavourable-bad (U2) in the last two reports under Article 17 of the Habitat Directive.

The project ran from 01. 11. 2015 to 31. 10. 2020 and had 75-percent co-funding from the EU LIFE+ Nature and Biodiversity financial mechanism, with the Ministry of the Environment and Spatial Planning of the Republic of Slovenia (25%) and project partners also contributing to the project as co-financiers.

By completing a number of planned project activities, we contributed to conservation of the species-rich dry grasslands in Eastern Slovenia and their sustainable management.

HT 6210 (*)

One can recognise them by the grass, called upright brome (*Bromopsis erecta*), a typical part of the turf. Typical plants include quaking-grass (*Briza media*), common sainfoin (*Onobrychis viciifolia*), pannonian thistle (*Cirsium pannonicum*), stemless carline thistle (*Carlina acaulis*), bulbous buttercup (*Ranunculus bulbosus*), meadow clary (*Salvia pratensis*), thyme (*Thymus* spp.), tufted milkwort (*Polygala comosa*), ox-eye (*Buphthalmum salicifolium*) and carnations (*Dianthus* spp.) (Kaligarič & Trčak 2004; Škornik 2016).



SEMI-NATURAL DRY GRASSLANDS AND SCRUBLAND FACIES ON CALCAREOUS SUBSTRATES (*Festuco-Brometalia*) (* important orchid sites) (HT 6210 (*))

This grassland type was the targeted habitat type in the project subareas Haloze, Kum, and Gorjanci. These are dry and semi-dry grasslands of Central Europe spreading outside the Sub-Mediterranean region across Slovenia, predominantly on calcareous substrates but also on flysch and acidic clay substrates. They generally grow on the southern slopes, covered with meagre, shallow substrate, poor in nutrients and partly desolated. Mostly, they are typical of the hilly areas in the traditional landscape and are in extensive use, with or without moderate fertilisation. They are thermophilous and extremely heliophilous.

They are preserved with mowing 1-2 times a year and/or extensive grazing and with moderate or without fertilisation.



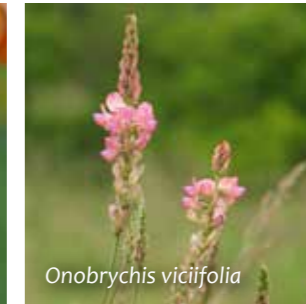
Buphthalmum salicifolium



Briza media



Lilium carnolicum



Onobrychis viciifolia



Salvia pratensis

A precious characteristic and peculiarity of these grasslands are often species of the orchid family (*Orchidaceae*) or wild orchids. In this case, the habitat type has priority from a conservation perspective under the Habitat Directive. The most common orchids in the project subareas are the green-winged orchid and three-toothed orchid (*Anacamptis morio*, *Neotinea tridentata*), pyramidal orchid (*Anacamptis pyramidalis*), fragrant orchid (*Gymnadenia conopsea*) and different varieties of bee orchids (*Ophrys* spp.).

The diversity of plants and animals on these grasslands can reach up to 80 different species per square meter (WallisDeVries et al., Biol. Conserv. 104; 2002).



Neotinea tridentata



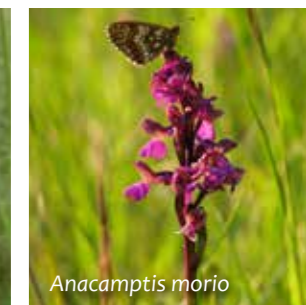
Orchis signifera



Ophrys holosericea



Anacamptis pyramidalis



Anacamptis morio

HT 6230*

Montane and Sub-Alpine herb species are typical of the turfs that make these grasslands look colourful and attractive: mountain arnica (*Arnica montana*), hungarian gentian (*Gentiana pannonica*), bearded bellflower (*Campanula barbata*), martagon lily (*Lilium martagon*), giant cat's ear (*Hypochoeris uniflora*), white hellebore (*Veratrum album*) and certain wild orchids, e.g. fragrant orchid (*Gymnadenia conopsea*).

If not mown, the *Nardus* grasslands often become overgrown with blueberries (*Vaccinium myrtillus*), attracting a diverse animal population with their fruit. The most important among them is the cranberry blue butterfly (*Plebeius optilete*), in Slovenia present exclusively in the Pohorje area, 1400 m above sea level. The grasslands' margins transitioning to forests, with a rich undergrowth of blueberries and cranberries, are an important feeding territory for the capercaillie (*Tetrao urogallus*) and black grouse (*Tetrao tetrix*) as well as other wildlife.

Today, these habitats are endangered, especially due to the inappropriate use and extensive overgrowth of the land as a consequence of abandoning the agricultural use. In the Pohorje area, the HT 6230* share more than halved over the past 80 years, undergoing an intensive forestation process (14.5 %).

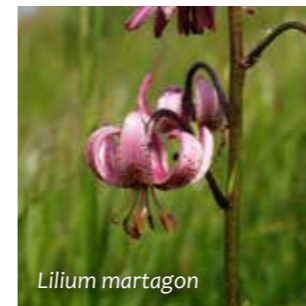
SPECIES-RICH NARDUS GRASSLANDS (*Nardus stricta*), ON SILICEOUS SUBSTRATES IN MOUNTAIN AREAS (HT 6230*)

These grasslands were the targeted habitat type in the Pohorje project subarea. This habitat type is generally found on acidic, nutrient-poor substrates predominant in the montane zone, on the silicate bedrock substrate. There are grasslands in Pohorje, called the *Plains of Pohorje*, typical of the surface areas created as a consequence of traditional use (grazing, mowing). These grasslands are also often called "volkovja" (*Nardus*), due to the characteristic and prevailing matgrass (*Nardus stricta*). In addition to matgrass, other grasses and grass related species in these grasslands are red fescue (*Festuca rubra*), tufted hairgrass (*Deschampsia caespitosa*), field wood-rush (*Luzula campestris*), etc.

They are preserved with one late yearly mowing and/or extensive grazing and without fertilisation.



Campanula barbata



Lilium martagon



Potentilla erecta



Vaccinium myrtillus



Nardus stricta



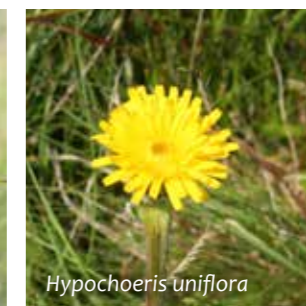
Veratrum album



Arnica montana



Gentiana pannonica



Hypochoeris uniflora



Gymnadenia conopsea

WHY DID WE START THE PROJECT

Species-rich grasslands used to be widespread throughout Europe, while in the last 100 years, their area has strongly decreased all over Europe (WallisDeVries et al., Biol. Conserv. 104; 2002).

Livestock breeding was the main reason for the creation of grasslands; due to the increase in population density, an ever-increasing need for the production of food and animal feed arose and deforestation was thus encouraged. With the agricultural revolution of the 20th century, placing the focus on intensification and yield maximisation per surface area, the **conservation status of the species-rich grasslands drastically deteriorated**. Along with wetlands, extensive grasslands are among the most endangered ecosystems in Europe, as their existence is dependent upon sustainable, moderate use, which in terms of market economy usually does not provide enough profit to the owners of such land.

The grasslands are either intensified through fertilisation, early or repeated mowing and too intense grazing or they are abandoned and gradually become overgrown. In both cases, the species diversity decreases greatly and the landscape itself changes. Species-rich grassland conservation thus depends on their proper extensive use.

Farmers, whose work is often insufficiently appreciated and respected, play a key role in the preservation of species-rich grasslands.

Extensive grasslands are also an important source of many public goods and services for people. The grazing livestock (e.g. cattle, sheep, goats, donkeys) is a source of quality meat and milk and dairy products as well as other wool and leather products. The grasslands provide a possibility for recreation and relaxation and inclusion of the colourful dry grasslands in tourism. The grasslands also absorb carbon and thus contribute to lower greenhouse gas concentration in the atmosphere.

THREATS TO THE DRY GRASSLANDS

The project addressed the following **threats to the dry grasslands**: ♦land abandonment and overgrowing, ♦intensive use, ♦eutrophication, ♦fragmented ownership structure and small lots, ♦population ageing, ♦abandonment of tall tree meadow orchards, ♦erosion, ♦tourism and gathering and ♦low level of awareness about the importance of conservation of extensive species-rich grasslands.

THE PURPOSE AND OBJECTIVES OF THE PROJECT

The main objective of the project LIFE TO GRASSLANDS is **improvement of the conservation status of species-rich grasslands in Eastern Slovenia by establishing their appropriate sustainable use in the project subareas (PSA) Haloze, Gorjanci, Kum, and Pohorje**.

The project is focused on two habitat types listed among the habitat types of EU Importance: species-rich *Nardus* grasslands (*Nardus stricta*), on siliceous substrates in mountain areas (HT 6230*) and semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*), *which are important orchid sites (HT 6210(*)). The main project objective was to stimulate the local population of farmers to preserve the species rich grasslands. The project is an implementation and upgrade of the existing dry grassland management system in Slovenia through the Natura 2000 Management Programme for Slovenia (2015 – 2020).

The project ensured the appropriate long-term use of the dry grasslands by reintroducing extensively managed mowing and grazing, reviving traditional tall tree meadow orchards, proposing improvement in efficiency of sustainable dry grasslands management in national agricultural policies, building a network among the dry grassland owners and their potential users, improving the farming economic viability (through education about dairy, meat and fruit processing and the importance of product branding, promoting higher value grassland product production and processing, preparation of a system for the dry grassland products' collective brand, lowering the costs of farming by common use of mowers and trailers) and improving the knowledge and raising awareness of the public about the importance of dry grassland preservation.



SUMMARY OF THE PROJECT ACTIVITIES AND RESULTS

Identification of overgrown areas, a review of past agricultural use and the initial survey of the targeted habitat types conservation status

Action plans to improve the condition and to ensure the sustainable management of the dry grasslands were prepared, including conservation guidelines for species-rich grasslands management (HT 6210 (*) and 6230*) for all four project subareas. A broad scope of stakeholders was included in the preparation process of the conservation guidelines: experts, representatives of the partner associations, societies and farmers and other interested stakeholders. The initial and final mapping of the targeted habitat types was carried out according to the prepared methodology of how to determine the conservation status of the targeted habitats by using the indicator species and their reference values with standardised field survey forms.

Land leasing and purchasing of abandoned grasslands to ensure sustainable management

With the aim to ensure long-term sustainable management of the dry grasslands, we purchased or leased 27 ha of abandoned land in Haloze and 2.3 ha in Gorjanci.

Removal of excessive overgrowth on agricultural land

We removed the overgrowth on 16 ha on Gorjanci, 47 ha in Haloze, 20 ha on Kum and 53 ha on Pohorje subareas. In total we removed overgrowth on more than 136 ha of grasslands. We carried out 23 volunteer nature conservation actions for removal of overgrowth.

Ensuring sustainable grassland management by guidance and equipment provision

By including more than 360 farmers in the project activities, we ensured sustainable management in over 670 ha of the dry grasslands. With the aim to ensure long-term sustainable late mowing and grazing management, we gave the farmers, free use of, four mountain mowers and one tractor mower, one mulcher, over 110 km of cattle and sheep fences and six trailers for moving livestock between pastures.

Restoration and establishment of tall tree meadow orchards

We ensured the planting of 41 ha of new tall tree meadow orchards and the restoration of 44 ha of existing tall tree meadow orchards. The farmers received over 3500 saplings of old varieties of tall tree orchard fruit trees, in addition more than 780 old orchard trees were pruned. We also organised 15 workshops, where farmers learned the art of pruning the tall tree orchard trees; we had 10 volunteer actions of sapling planting, with a demonstration of a proper planting method.

Preparation of farm management plans for the interested farms

Farm Management Plans for 49 interested farms were prepared, with the main objective to enable the farms economically viable farming taking into consideration the extensive, use of species-rich grassland.

Preparation of expert bases for an agri-environmental programme in the field of sustainable grassland management

We prepared a harmonised expert proposal of the results-based agri-environmental measures for dry grasslands. This is **the first proposal of results-based agri-environmental measures in Slovenia**. We presented the proposed measure to the Ministry of the Environment and Spatial Planning, the Ministry of Agriculture, Forestry and Food, the Agency for Agricultural Markets and Rural Development and the Agriculture and Forestry Chamber of Slovenia as well as at other international events.

The activities and plans to establish a collective trademark and product promotion related to the dry grasslands and tall tree meadow orchards

In the scope of the development of economic study for Haloze, we prepared all the necessary documentation to establish a collective brand “S haloških bregov/lazov” (“From the slopes of Haloze”), with the purpose of promoting the production and processing of the products from dry grasslands and tall tree meadow orchards. These include produce (milk, meat, fruits, herbs, honey) and products (food and craftwork) from farms extensively managing dry grasslands of Haloze with the aim of their long term conservation.

Promotional and educational activities

We cooperated with the decision-makers in the field of agriculture and environment and with other stakeholders (foresters, farmers, land owners, municipalities) at the national and local level. We developed programmes and didactic aids for schools and carried out national trainings for teachers and education for schoolchildren about the importance of grassland conservation. In all four project subareas, information rooms and interpretation paths have been equipped, and different publications were prepared for the public.

Social-economic study was prepared

Preparation of the Study of the projects' impact on ecosystem services





HALOZE

THE HALOZE SUBAREA

Haloze is a dynamic hilly landscape in north-eastern Slovenia, south of Ptuj, between the Dravinja and Drava rivers to the north and the Slovenian-Croatian border to the south. Over the centuries of cooperation between man and nature, a mosaic landscape with strong biotic diversity has developed. Approximately 55% of the area is covered with forests, 25% by species rich dry and wet grasslands, followed by tall tree meadow orchards, fields and vineyards. A major part of the steep slopes with grasslands and vineyards is overgrown.

In the project, the overgrowth was removed and 47 ha of the overgrown farmland area were revitalised. By signing an agreement on participating in the project, 100 farms will ensure long-term extensive management of 240 ha of dry grasslands. We purchased or leased 27 ha of land in the abandoned area of the Čerinovo estate that will be managed by the project partner the Rural development centre PRJ Halo in cooperation with another farm. The farms participating in the project were given for free use 4 mountain mowers, 10 brush cutters, 4 trailers for livestock transportation between pastures and pasture equipment (92 km of (small) cattle fence, electric fence units and cattle watering systems). With a rejuvenating pruning of 588 old trees and planting of 3200 saplings of old varieties of tall trunk fruit trees, we revitalised or established anew 80 ha of tall tree meadow orchards. Ten bug hotels were built, 30 farm management plans developed and an economic study was prepared with the activities related to the development of a collective brand of products from the Haloze dry grasslands.

The natural conditions maintain a valuable image of an extensive landscape with a high biodiversity level. The latter is particularly characteristic of the steep slopes with dry grasslands or “*lazi*”, where the habitat type is called **semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) (HT 6210 (*))**. In Slovenia, orchids reach their highest density in the Haloze area. At least 17 orchid varieties have been registered there, including a priority qualifying species of orchid – **the Adriatic lizard orchid (*Himantoglossum adriaticum*)**. A major part of Haloze is thus included in the two Natura 2000 areas.

Because of the dynamic hilly relief with short and steep slopes (up to 35 degrees) and a lower grass yield comparing to the lowlands, the grass is mown relatively late nowadays (end of May, beginning of June) and traditional farming practices, extensive mowing and grazing are still maintained. The share of overgrown areas due to emigration, population ageing and abandoning of farming on small Haloze farms (sized 3,5 ha on average) has nevertheless been increasing year by year over the last decades.



Čerinovo, September 2018



Čerinovo, April 2020





GORJANCI

THE GORJANCI SUBAREA

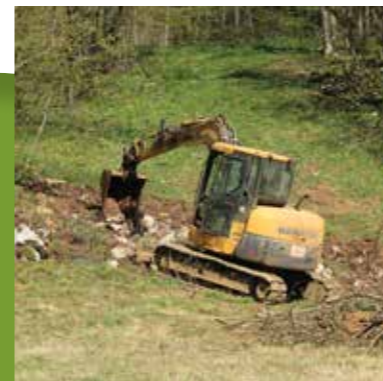
Gorjanci are sparsely populated plateau-like hills in south-eastern Slovenia, stretching from the Črmošnjiška Valley in the West to the Sava River near Brežice. In the north, the Gorjanci Hills steeply descend to the Novo mesto region and Krško plain, and in the south they descend to the Bela krajina and Karlovac basin (Croatia).

Gorjanci are characterised by rounded forest areas with dispersed islands of the grasslands or *košenice* - mown grasslands. Larger preserved complexes of the grasslands are located in Rute, Miklavž and Javorovica. Due to their location, the mown grasslands in Gorjanci receive less light and more precipitation; the development of plants starts later and provides lower yields, thus the mowing period in Gorjanci has always started relatively late (after the wheat and barley harvest in the lowlands).

As a consequence of natural conditions and the extensive management of mown grasslands in the past, **semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)** (* important orchid sites) (HT 6210 (*)) have developed. The mown grasslands of Gorjanci stand out for their variety of species and plant groups, appearing in turns over small areas. The mown grasslands above the Javorovica village represent one of the last areas of extensive grasslands in Eastern Slovenia preserved in such good condition.

The landscape in Gorjanci is quickly changing due to the changed social conditions. Because of the hard conditions for cultivation, the mown grasslands are predominantly exposed to abandonment, leading to slow but certain forestation. To a lesser extent, the mown grasslands are endangered by different recreational activities (hiking, cycling, herb gathering, motor and ATV driving).

We cleaned 16 ha of (partially) overgrown areas in the Gorjanci area. The owners will manage 34 ha of the mown grasslands in line with the conservation guidelines that we prepared also on the basis of past grassland management practices in this area. In the scope of the project, we purchased about 2 ha of mown grasslands that will be managed by project partner Society Gorjanske košenice. In close proximity to the mountain cottage on Miklavž we restored and enlarged the existing orchard.





KUM THE KUM SUBAREA

Kumljansko is a dynamic hilly area with karst characteristics, between the valleys of Sava, Sopot and Šklendrovec rivers, in the heart of Slovenia. In the areas with low population, smaller settlements and dispersed farms are typical, surrounded by old tall tree meadow orchards with autonomous fruit varieties.

Thirty farms have joined the project in the Kum area, contributing to conservation of the grasslands and tall tree meadow orchards in an area covering more than 80 ha. We removed the wooden overgrowth on almost 20 ha of the abandoned grasslands and have provided over 16 km of pasture fence, covering 30 ha of the land, to the farmers for free use. For easier management in the future, we bought one mountain mower, several brush cutters, a mulcher and a trailer for livestock transportation. Ten farms also received farm management plans, while 5 ha of tall tree meadow orchards with autonomous fruit varieties were revitalised by rejuvenating pruning of 196 old trees and planting 263 saplings of old autonomous fruit varieties. With the aim of raising awareness about the importance of dry grasslands, we equipped a “grassland” classroom in the premises of LC Dobovec and organized 17 science classes, which were attended by more than 600 students from Trbovlje primary schools.

The major part of the area is covered by forest with many protected species, among which the “Kum’s blind beetle” (*Anophthalmus schauvi kumensis*) is one of the rarest. Approximately a fifth of the area is covered with agricultural land. The dynamic relief allows more intensive land cultivation only on the bottom of sinkholes and on the plateau-like ground, while the extensive species-rich grasslands prevail on the steeper slopes. In professional terminology, these dry, species-rich grasslands are referred to as **semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) (HT 6210 (*))**. Among the typical plants of these grasslands, the wild orchids, carniolan lilies (*Lilium carniolicum*) and orange lilies (*Lilium bulbiferum*) are the most prominent. Many animal species depend on the grasslands; among them, the protected butterfly species marsh fritillary (*Euphydryas aurinia*) and jersey tiger (*Euplagia quadripunctaria*) are particularly noticeable.

Careful land cultivation has created the traditional landscape. The farmers always knew when the time was right for mowing the Kum grasslands. They would observe as the caraway ripened and when the seeds started to smell that the time was right for the first mowing at the beginning of July.





POHORJE

THE POHORJE SUBAREA

Pohorje is a hilly mountain chain in north-eastern Slovenia, with a typical landscape of coniferous forests and species-rich grasslands (planje – the plains), categorised as **Species-rich *Nardus* grasslands (*Nardus stricta*), on siliceous substrates in mountain areas (HT 6230*)**.

The project subarea is located at an average of 1400 metres above-sea level and includes ten units: Ostruščica, Mulejev vrh, Javorič-Planinka, Kraguljišče, Turn, Volovica, Klopni vrh, Jezerski vrh, Trije žebliji and Obrolovo.

The farmers in Pohorje are well skilled in managing the plains; however, over the past decades, they have been losing interest and willingness for farming in the plains. The consequence of this is overgrowth of the grasslands. We have been encouraging the land owners and leaseholders to use the land sustainably through different project activities.

The fence will also contribute to channelling the sport-recreational and other tourist-focused activities off grasslands, as the Rogla surroundings is recognised as a tourist and recreational destination. The Rogla pasture community was given for free use a pasture trailer for transportation of animals.



In the project, the overgrowth was removed from 53 ha (10.000 cubic metres of wood), mostly on overgrown farmland. To facilitate grassland management, the areas were further cleaned by removing the stumps with mulching or uprooting on more than 21 ha of land. After removing the stumps, we proceeded to flatten the ground and sow oats and local hay debris, which will facilitate and expedite the natural insemination. A wood fence was built in the scope of the project, in the total length of 2000 metres in the Ostruščica and Kraguljišče area, seven farm management plans and a grazing plan were prepared and pasture equipment for an electric fence was bought (wire, poles, pasture machines, water troughs and water tanks), which will facilitate and increase the economic viability of farming in the long run.



THE EFFORTS TO IMPROVE THE ECONOMIC STATUS OF THE FARMS

Development-economics study

As part of the project, a **economics study for dry grassland conservation in the Haloze project subarea** was prepared, along with all the required documentation to build a **collective brand (CB) “From the slopes of Haloze” (“S haloških bregov/lazov”)** for the produce and products from the Haloze dry grasslands. The study includes the current situation in Haloze, a networking vision and model, logistics and marketing of the products certified by the collective brand, and complete documentation (policies, assessment forms, application forms...) for granting the right of use of the CB “From the slopes of Haloze”.

There were many workshops for the key stakeholders from Haloze (farmers, caterers, craftsmen, municipalities...) with the aim to mutually connect and educate them about the importance of branding quality products for the extensive grasslands and meadow orchards. Ten trainings were completed (8-hour and 30-hour courses) for produce processing (milk, meat, fruits), aiming to increase production with added value on the small Haloze farms. There were four test evaluations of products (dairy and meat products, fruits, herbs and honey and craftwork) carried out by renowned experts (Janez Bogataj, PhD., Assist. Prof. Mojca Korošec, Tanja Lešnik Štuhec, PhD., Tadeja Vodovnik Plevnik...). With the workshops for the transfer of practices, we transferred the knowledge and experience from Haloze to the other project subareas: Pohorje, Gorjanci and Kum.

Farm management plans: For the purpose of increasing the profitability of the selected farms included in the projects and to ensure long-term management of the dry grasslands, we prepared the farm management plans for 49 farms. The preparation of the plans was based on the management strategy of a farm, its future development potential and at the same time improvement in conservation status of dry grasslands, all in the view of general improvement of the economic perspective of the agriculture in project areas.

THE PROPOSAL OF THE AGRI-ENVIRONMENTAL MEASURES

The only systematic instrument to achieve a favourable conservation status of the plant and animal species and habitat types on the agricultural land in Slovenia are the agri-environment measures (AE) based on the prescribed rules (the management schemes). There is a low number of applications for these measures due to the typically overwhelming requirements for small, dispersed or hill farms, that are often owned by elderly people. Slovenia is not reaching the objectives of species-rich grassland conservation for habitat types 6210 (*) and 6230*, as set out in the Natura 2000 Management Programme. To improve the conservation status of both targeted habitat types, a proposal for a **results-based AE-measure for the species-rich grasslands** was prepared in the scope of the LIFE TO GRASSLANDS project.

The results-based agri-environment measures are schemes where farmers and other land managers receive payments for achieving a specific environmental result. They are different from the traditional payments that prescribe when or what a farmer must do or not do to receive the payment. The results-based approaches provide the farmers with an opportunity to use their know-how and experience in land management in a way to achieve the targeted environmental result (for example: biodiversity, carbon storage, water regulation) and take into account the economic profitability of the farm.

The proposed results-based AE-measure is based on monitoring the **indicators of (in)appropriate grassland use (for example, the turf height and structure, treading and overgrowth of the grasslands)** and a presence /absence of minor number of indicator plant species that we have specified particularly for each project area. The project also involved training for farmers to recognise the indicative species and fill out field survey forms. With the support from the project, the Result based payments network – “RBP network” – <https://www.rbpnetwork.eu/> website was created. Several approaches of the results-based schemes from EU countries are presented on the website. The opinions of farmers included in the RBP-schemes are also included.





"GRASSLAND CLASSROOM" AND PUBLIC RELATIONS

To achieve better awareness about the importance of species-rich grassland conservation, the importance of the project and the project subareas as well as Natura 2000 and the EU financial instrument LIFE, we prepared diverse promotional materials - brochures, postcards, posters, a key to determine the orchids, an exhibition, products from the dry grasslands and meadow orchards ...

We also prepared three manuals for teachers and pedagogues, where the ideas/suggestions for educational workshops on the subject of dry grasslands for preschool children in kindergartens and primary school pupils are provided. A game "Get to know the grasslands with Arnika and Primožek" was printed, available also at <https://www.lifetograsslands.si/spoznaj-travisca-z-arniko-primozkom/>, and a didactic booklet "Wandering through the grasslands".

Two professional trainings for teachers in Kum and Haloze were carried out in the framework of the national Programme catalogue for further education and training of associates in upbringing and education (KATIS); we participated in the Subsidiary School Teachers Association's expert meeting twice and participated in the "24 ur z reko Muro - 24 hours with the Mura river" events. We organised an art competition "Wandering through the grasslands" and exhibited the received works at the national event "Specialities of Slovene farms". Many trainings, lectures and nature science days (over 50 events) were organised as well as a summer camp in Gorjanci ("Cvetnik"). More than 2300 children and over 140 teachers from all over Slovenia were thus educated on the importance of the grasslands.

On the website www.lifetograsslands.si and www.travisca.haloze.org, we reported about the project events, activities and results. We cooperated with national TV in the filming of the documentary entitled "Life on the grassland" in the scope of the Biotops series and the in the TV series "Natural Parks of Slovenia" with the contribution in presentation of the Kum Landscape Park. Media also had good coverage of the project, with more than 180 articles related to the project.

During the project, "Grassland Open days" were organised in all project areas as well as many public lectures, workshops, presentations, trainings, volunteer actions,... The project was presented at the Agra and Narava - zdravje fairs, and we also organised the international conference titled "Challenges and opportunities in multifunctional management of grasslands", where more than 220 experts from six countries participated.

Information boards and interpretation charts were prepared and set up in Rogla, Gorjanci and Haloze, and four information rooms were equipped in Cirkulane, Gorjanci ("Cvetnik" on Miklavž), Kope and Kum (Dobovec). The built interpretation infrastructure will be used as a learning/research tool for learning in nature, as a supplementation of the tourist destination with presentations and experiences and as a promotion tool for sustainable grassland management.

Numerous meetings, trainings, workshops and networking meetings with a focus on species-rich grasslands management and conservation were organised for key stakeholders (farmers, agricultural consultants, mayors, local communities, foresters, societies...).

What farmers have said about the project

»By joining the LIFE TO GRASSLANDS project, I could complete the activities in the mown grasslands that I had planned for years but could never do all by myself. With the project's help, I will be able to manage the mown grasslands the way my parents and grandparents did, for a long time to come.«

SIMON GAZVODA, Gorjanci



»When you realise nature is the cure for all our troubles, you become grateful and return good with good! With our children being our life, we want to bring them up in a healthy environment and pass on our love for nature! The LIFE TO GRASSLANDS project is one big love for life and nature, and with the help of the project, we received fence for free use for our sheep in the farm.«

ANA and DANIJEL, Haloze

»With the LIFE TO GRASSLANDS project, our ecological farm managed to restore a tall tree orchard and pasture equipment and increased the grassland area by using a mulcher and by removing the overgrowth. In cooperation with the project staff, we also found rare flowers on our farm that nobody had ever noticed before. I hope this project leaves a rich heritage to our posterity.«

JOŽE KREŽE, Kum





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