

# Action Plan for Ljubljana Marsh region (Slovenia)

March 28<sup>th</sup>, 2019, Ljubljana



## Part I – General information

Project: BID-REX (From biodiversity information to decisions)

Partner organisation(s) concerned: Nacionalni inštitut za biologijo

Country: Slovenia

NUTS 2 region: Zahodna Slovenija

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## Part II – Policy context

- The Action Plan aims to impact:
- Investment for Growth and Jobs programme
  - European Territorial Cooperation programme
  - Other regional development policy instrument

Name of the policy instrument(s) addressed:

### ***Regulation on Ljubljana Marsh Nature Park***

Further details on the policy context and the way the action plan should contribute to improve the policy instrument:

*Regulation on Ljubljana Marsh Natural Park is a keystone legal document prescribing nature conservation goals, rules and regulations and long-term development strategies of the Ljubljana Marsh Nature Park, established in 2008. The Regulation foresees development of 10-years Management plan, which will define in details nature conservation actions in the Park. Additionally, annual work plans are also foreseen and implemented. The Park is an area of exceptional natural and cultural heritage, with high biodiversity and mosaic of diverse habitats, from wet, traditionally managed grasslands to hedges and forests, scrublands and watercourses. The area host many rare and endangered plant and animal species, and is designated as the Natura 2000 site.*

*The policy instrument foresees implementation of measures for long-term conservation of species and habitats where conservation mainly depends on sustainable agricultural practices and conservation measures for species of European conservation concern listed at the Habitat and Bird Directives, which are qualifying Natura 2000 site.*

*The main drawback of the instrument is, that it is focusing mainly on the species of European conservation concern (i.e. Natura 2000 species), while the protected area host also populations of many species with high national, regional and even global importance, but not listed in EU directives. Additionally, the access to biodiversity information needed for the conservation is at the moment weak, data on species are scattered around different organizations and individual data providers.*

*Presented action plan aims to improve the access to existing biodiversity information for Ljubljana Marsh Nature Park in the form that will be accessible and applicable also for managers and decision makers. A broader scheme, including all existing biodiversity information not only for Natura 2000 species, will be developed. Further, we will identify priority species for Ljubljana Marsh, review current agricultural practice and, if needed, propose new practices and financial instruments that will better support identified biodiversity conservation measures. This will result in more balanced and effective nature conservation regime for preservation of unique biodiversity features in the area.*

## Part III – Details of the actions envisaged

### **ACTION 1:**

Name of the action: **COLLATION OF BIODIVERSITY INFORMATION AND GAP ANALYSIS**

**1. Relevance to the project** *(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)*

During BID-REX workshops, the partners and involved stakeholders recognized that biodiversity data provision is the initial step in the process of biodiversity information flow in all regions. As learned during the first BID-REX interregional workshop “Information needs for decision-makers”, biodiversity data are crucial to underpin good policy and decision-making. We have learned that by itself, a single recording is not very useful, but datasets of thousands of these recordings spanning an entire region over a number of years can provide decision makers with large-scale information about distribution, condition, status, and trends of species and habitats. Moreover, the workshop participants agreed that the availability of comprehensive, sound, and up-to-date data should be a key requirement to implement policies, strategies and actions dealing with monitoring of biodiversity loss, of the progress towards biodiversity targets, as well as to assess the status and future trends of biodiversity. We have also learned that data quality assurance and its sound scientific interpretation is very important for correct use in conservation management. Moreover, it is very important to identify what is missing (e.g., data, knowledge, experts) and what the needs of users are to put the efforts into the right direction. Hence, one of the elements of this action is also GAP analysis of the status of biodiversity information for Ljubljana Marsh Nature Park. Inspiration to collate all available biodiversity information for Ljubljana Marsh in one form came from workshops discussions and several cases presented by BID-REX partners. The cases of Norfolk Biodiversity Information Service (NBIS) that holds information on species, geodiversity, habitats and protected sites for the county of Norfolk (UK), and of the Nature Information System of the Basque Country (Spain) that provides information organized in interconnected elements (i.e., species, habitats, sites, references, occurrences, indicators, institutions, people of the network of knowledge) were especially inspiring. The BID-REX learning process highlighted the following: (i) establishment of network of knowledge (i.e., connecting experts for different taxonomic groups), (ii) routing the data from different collectors to one system/database, and (iii) knowledge on what are the needs and what are the missing information, are the key components of successful use of biodiversity data in decision making. These determine also efficient use of funding for biodiversity conservation.

**2. Nature of the action** *(please describe precisely the content of action 1. What are the specific activities to be implemented?)*

The Ljubljana Marsh is an area of diverse ecosystems and species, many of them endangered or almost extinct. Large number of species, ranging from common to

widespread, are highly endangered or even endemic to the area. Due to high biodiversity, the area started to attract biologists early in the history - the first biological data are from the end of 18<sup>th</sup> century. At present, data are being gathered by over 50 data collectors from 20 different governmental, non-governmental or research organizations, universities, or private companies. Currently, the data for Ljubljana Marsh are scattered between few larger databases such as those for birds, fungi, Natura 2000 species, fish, combined fauna and flora data that can be accessed on-line with permission. Meanwhile, many data are stored in personal or institutional data collections and difficult to access. In this action, all data providers that collect and hold biodiversity data from Ljubljana Marsh will be contacted to share their data and taxonomic knowledge. Their contribution will be composed into common collated species list for Ljubljana Marsh Nature Park. Additionally, identification of gaps in biodiversity information using broad, three level current knowledge classification (species is present but unknown, it is poorly known and good known) will be carried out to analyse which taxonomic groups are not well known and the reasons for lack of data will be searched (lack of experts, lack of funding opportunities). A result of this action will be also establishment of knowledge network, in a form of a list of all taxonomic experts and data collectors working in the area of Ljubljana Marsh Nature Park.

To summarize, the results of action 1 will be best possible collated information on biodiversity in Ljubljana Marsh Nature Park, established knowledge network, and gap analysis of biodiversity information status.

**3. Stakeholders involved** *(please indicate the organisations in the region who are involved in the implementation of the action 1 and explain their role)*

The data providers that will be involved in the collation of biodiversity data for Ljubljana Marsh are representatives of non-governmental organisations, national research institutions, universities, private companies, and governmental institutions. All of them collect biological data, but with different focus and aims. For example, governmental institutions collect data mostly through national or international monitoring schemes, researchers are the problem specific oriented, etc. Detailed list of all stakeholders is provided in the Initial situation analysis that was elaborated in the beginning of the BID-REX project.

**4. Timeframe** *(please specify the timing envisaged for action 1)*

October 2016-June 2019

This action started early in the phase 1, in the second semester (October 2016), after Initial situation analysis was finalized and all relevant data providers identified. Alongside with Initial situation analysis, the communication and discussions with data providers started, individually and during local stakeholder workshops. First data were provided in September 2018 and collation will be finalized in June 2019.

**5. Indicative costs** *(please estimate the costs related to the implementation of action 1)*

Approximately 25 000 EUR.

The costs will be related mostly to the working hours of data providers for preparation of data related to Ljubljana Marsh nature Park and work to organize the gathered data into collated list as well as working hours for GAP analysis.

**6. Indicative funding sources** *(please describe how action 1 will be financed. Is it through the policy instrument(s) indicated in part II)*

Stakeholders – data providers contributed working hours funded through different programmes depending on the financial sources of the organization the contributing stakeholder is employed (Slovenian Research Agency, governmental funds, private funding or volunteer work).

**ACTION 2:**

Name of the action: **ACCESSIBLE BIODIVERSITY INFORMATION**

**1. Relevance to the project** *(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)*

Discussions during BID-REX interregional workshops highlighted that access to biodiversity data available in the required format is crucial to support effective decision-making. The partners and stakeholders concluded that technology plays a key role in guaranteeing and facilitating access to information as it can be more efficiently accessed, interpreted, analysed, and manipulated. In order to improve and facilitate access to biodiversity information for users, web portals for biodiversity data, user-friendly interfaces and appropriate portals (websites/apps) should be introduced. At BID-REX workshops, several good practices for tools providing access to biodiversity information were presented by partners and involved stakeholders. Similar as for Action 1, inspiration for organization of the information into the form that will be accessible on-line to all relevant stakeholders' origin from the Norfolk Biodiversity Information Service (NBIS) and Nature Information System of the Basque Country (Spain), but other examples were also incentive. SITxell (<http://www.sitxell.eu>) is a successful example of an Open Data Infrastructure, which provides biodiversity information to the municipalities of the Barcelona Provincial Council, for incorporation into local planning and policies. BioGeoNet is a taxonomic and biogeographic database of the species and habitats of Belgium, managed by the non-profit association Natagriwal and provides information for agri-environment scheme monitoring and support land owners by providing information about ecological restoration of their lands that make up part of the Natura 2000 network. All these examples provoked the idea to transfer the collated biodiversity information for Ljubljana Marsh into on-line form that will be openly accessible to users.

**2. Nature of the action** *(please describe precisely the content of action 2. What are the specific activities to be implemented?)*

The activities within Action 2 are tightly connected with and proceed from Action 1 where all existing biodiversity information about Ljubljana Marsh Nature Park will be

gathered by involvement and support of most of data collectors and experts for this region. In order to increase the accessibility of gathered information the list of all species known for Ljubljana Marsh will be organized into on-line form and will be available through web page of Ljubljana Marsh Nature park:

<http://www.ljubljanskobarje.si/>

**3. Stakeholders involved** *(please indicate the organisations in the region who are involved in the implementation of the action 2 and explain their role)*

The technical support for preparation and organization of collated data in the form of on-line tool will be provided by Centre for cartography of fauna and flora (CKFF). The platform – web page - where the biodiversity information will be openly accessible, will be kindly shared by Ljubljana Marsh Nature Park management body.

**4. Timeframe** *(please specify the timing envisaged for action 2)*

July 2019 – December 2019

**5. Indicative costs** *(please estimate the costs related to the implementation of action 2)*

5000 EUR

The costs are related mostly to the working hours of the CKFF experts.

**6. Indicative funding sources** *(please describe how action 2 will be financed. Is it through the policy instrument(s) indicated in part II)*

Governmental or European funds.

### **ACTION 3:**

Name of the action: **PRIORITY LIST OF SPECIES FOR LJUBLJANA MARSH**

**1. Relevance to the project** *(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)*

The discussions between partners and stakeholders on strengths and weaknesses within the process of data management and dissemination during BID-REX interregional workshops provided several important lessons learned that were inspiration for this action. For example, it is critical that the biodiversity information is tailored to the needs and demands of the decision makers. Biodiversity information in databases is often highly complex and difficult for non-experts to understand. It is packed with relevant and non-relevant information for specific problem which stakeholder usually can not distinguish. For these reasons, the translation (or packaging) of data into useful information is a must. The biodiversity audit approach which is an example of good practice carried out by the University of East Anglia in

the United Kingdom, and has been developed to inform management of Natura 2000 sites was the main inspiration for this action. The advantages of this approach are clear answers to inform decision makers and defined long-term network. The approach involves stakeholder engagement from the beginning of the process to the end and uses biodiversity data to define the aims (what biodiversity, how to manage), includes citizen science and expert knowledge, defines integrated 'management guilds', takes into account the evidence-base for better management, and develops a cost-effective support for biodiversity prioritisation. Prioritization of species based on their importance for local area is part of this process.

**2. Nature of the action** *(please describe precisely the content of action 3. What are the specific activities to be implemented?)*

The main activity of this action will be construction of **a priority list of species** that are important for the Ljubljana Marsh NP. The prioritization will be carried out by involving experts for different taxonomical groups, by conducting group discussions about criteria for prioritization within LSMs and agreement on common approach. The activity will be carried out in parallel with collation of biodiversity data (Action 1). A list will indiscriminately include Natura 2000 and all other species.

**3. Stakeholders involved** *(please indicate the organisations in the region who are involved in the implementation of the action 3 and explain their role)*

In this action individual experts for taxonomical groups will be involved. The experts are coming from national research institutions, universities, non-governmental organizations, and private companies, and governmental institutions. Detailed list of the experts is provided in the Initial situation analysis that was elaborated in the beginning of the project.

**4. Timeframe** *(please specify the timing envisaged for action 3)*

September 2018 – September 2019

**5. Indicative costs** *(please estimate the costs related to the implementation of action 3)*

Approximately 21 000 EUR.

The costs incorporate the working hours of experts from different fields of data processing, analysis and interpretation.

**6. Indicative funding sources** *(please describe how action 3 will be financed. Is it through the policy instrument(s) indicated in part II)*

Experts will contribute working hours funded through different programmes depending on the financial sources of the organization the contributing stakeholder is employed (Slovenian Research Agency, governmental funds, EU funds).

#### **ACTION 4:**

Name of the action: **PILOT ACTION – testing the methodology Species Audit in Ljubljana Marsh Nature Park**

**1. Relevance to the project** *(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)*

During BID-REX interregional learning process, we identified Biodiversity Audit Approach, a good practice developed and implemented by UK partner, University of East Anglia. The Biodiversity Audit is a landscape-scale and evidence-based approach to deliver biodiversity information. A core of this approach is to collate all existing biodiversity data for selected area, prioritize them and use expert knowledge to define their ecological requirements, and lastly to organize them into management guilds (groups of species with same ecological requirements). This evidence-based approach can support decision making in nature conservation, such as, how many and which species will be preserved if we undertake certain conservation measures. The approach was until now carried out only in United Kingdom at three regions (Fens, Broads, Brecklands) but has high potential to be used in other regions. We recognized this good practice as excellent tool to improve the implementation of our Action plan which aims to result in more balanced and effective nature conservation regime for preservation of unique biodiversity features in the area.

**2. Nature of the action** *(please describe precisely the content of action 4. What are the specific activities to be implemented?)*

The pilot action will consist of testing the applicability of the new method for the biodiversity data existing for Ljubljana Marsh Nature Park. By implementation of pilot action, we will test if the method is transferable to other regions that differ in quality and quantity of biodiversity data, degree of degradation of environment and types of conservation measures and actions. In the pilot action, the status (presence, distribution, and endangerment) of species will be assessed using spatial data, and information on their ecological requirements will be provided by involving experts. The species requiring similar ecological processes and conditions will be then gathered into “management guilds”, and effect of current conservation measures on different guilds will be estimated. The output of the pilot action will be information for decision makers and managers how efficient are conservation measures and actions that are currently being implemented in Ljubljana Marsh Nature Park with suggestions how to increase efficiency. The pilot action will focus only on the two most wide spread conservation actions in Ljubljana Marsh Nature Park: conservation of grassland habitats of butterflies and conservation of birds of wet extensive meadows in Natura 2000 sites, both originating from Rural Development Program 2014-2020. By using the Species Audit Approach, we will demonstrate to decision makers if these conservation efforts efficiently protect species important for Ljubljana Marsh Nature Park

**3. Stakeholders involved** *(please indicate the organisations in the region who are involved in the implementation of the action 4 and explain their role)*

The users of the results of this pilot action will be the managers and decision makers from Institute of Republic Slovenia for nature conservation, Management body of Ljubljana Marsh Nature Park, and from Ministry for environment and spatial planning of RS, involved will be also conservationists from different NGOs and lastly the data providers and taxonomical experts.

**4. Timeframe** *(please specify the timing envisaged for action 4)*

April 2019 – September 2020

**5. Indicative costs** *(please estimate the costs related to the implementation of action 4)*

Approximately 67 240 EUR.

This would include work of different taxonomic and biodiversity experts in the region, purchase of privately owned biodiversity data and information, organization of stakeholder (managers) meetings, visits of UK owners of good practice and expenses for travel to UK.

**6. Indicative funding sources** *(please describe how action 4 will be financed. Is it through the policy instrument(s) indicated in part II)*

EU Regional development funds - Interreg programme Europe. This action was proposed as pilot action

**ACTION 5:**

Name of the action: **RECOMMENDATIONS FOR CONSERVATION MEASURES**

**1. Relevance to the project** *(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)*

To successfully maintain biodiversity, clear and scientifically justified conservation measures and activities are needed at protected areas as was proposed by BID-REX partner from University of East England. They managed to demonstrate that some Natura 2000 conservation measures do not protect local biodiversity even more they have devastating impacts on it. At Ljubljana Marsh Nature Park several conservation measures are already foreseen in relevant documents (program of management of Natura 2000 sites for example), but mainly they are all related to activities necessary to maintain favourable status of Natura 2000 habitats and species. The measures are not evidence based on biodiversity data for Ljubljana Marsh but they are an international obligation as in all other EU countries. The example from UK inspired us to carry out a comprehensive priority list of species for Ljubljana Marsh Nature Park, that we will produce it as part of Action 3 of our action plan, and will include a list of nationally, regionally and globally important species. We presume that for them newly developed conservation measures will likely be necessary to maintain or enhance

their conservation status. During last BID-REX workshop we get inspired by several proposals how to persuade managers and decision makers to adopt these new measures. This will be necessary if we are to protect high biodiversity on Ljubljana Marsh and even widely in the country, region and even at global scale when considering endemic species. We were inspired from other partners that for the success of implementation of the propose measures several approaches should be used, such as introduction of concepts of endemic or charismatic species or ecosystem services depending on the target addressing. If there are no endemic species - then just using concept of endangered or regionally important species.

**2. Nature of the action** *(please describe precisely the content of action 5. What are the specific activities to be implemented?)*

First, existing sustainable agricultural practices and conservation measures on Ljubljansko barje will be identified. We will relate those measures to all priority species and select these that already benefit from them. For those species we will not develop additional or new conservation measures. On the other hand we expect that several priority species (especially non-Natura 2000 species) will be left without relevant existing measures, because existing measures are not relevant for them. For those species we will prepare a list of new measures and proposal of changes in management practice. At the end, every priority species will have at least one conservation measure – or already existing or newly developed during this project. A list of new conservation measures and activities will be recommended to authorities. In all steps participation of local stakeholders, Ljubljana Marsh Natural Park managing authority, specialists with knowledge on biodiversity and agriculture specialists will be crucial. Since also important decision makers are among stakeholders, we expect that newly developed measures will be positively accepted.

**3. Stakeholders involved** *(please indicate the organisations in the region who are involved in the implementation of the action 5 and explain their role)*

Institute of Republic Slovenia for Nature conservation  
Management body of Ljubljana Marsh Nature Park  
Ministry for environment and spatial planning  
Chamber for agriculture and forestry  
NGOs

**4. Timeframe** *(please specify the timing envisaged for action 5)*

October 2019 – December 2020

**5. Indicative costs** *(please estimate the costs related to the implementation of action 5)*

10 000 EUR

The costs are related to working hours of involved stakeholders.

**6. Indicative funding sources** *(please describe how action 5 will be financed. Is it through the policy instrument(s) indicated in part II)*

Involved stakeholders will contribute working hours funded through different programmes depending on the financial sources of the organization the contributing stakeholder is employed (EU and governmental funds).

Date: 28.3.2019

Name of organization:

Signature of representative of the relevant organization(s): \_\_\_\_\_