



BID-REX

Interreg Europe



European Union
European Regional
Development Fund

From biodiversity data to biodiversity audit: methodology from UK implemented in Slovenia

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NACIONALNI INŠTITUT ZA BIOLOGIJO

14.6.2017 | Bilbao

Ljubljana Marsh Nature Park



Biodiversity of Ljubljana Marsh NP



**Giovanni A. Scopoli
(1723-1788)**



Rare species

Eurasian curlew (*Crex crex*)



Isolated population in S Europe

Marsh Sculpin (*Cottus metae* Freyhof, Kottelat, Nolte 2005)



Endemic for wider Ljubljana area

The Adriatic Marbled Bush-cricket (*Zeuneriana marmorata*)



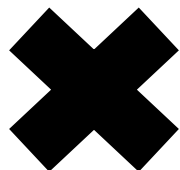
Only in N Italy and Ljubljana Marsh!

Extinct Species

Montagu's harrier (*Circus pygargus*)



1950



Short eared owl (*Asio flammeus*)



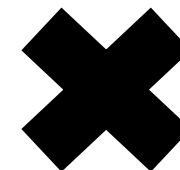
1936



Great grey shrike (*Lanius excubitor*)



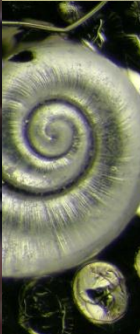
1912



Environment is changing



Kryštufek (2008)

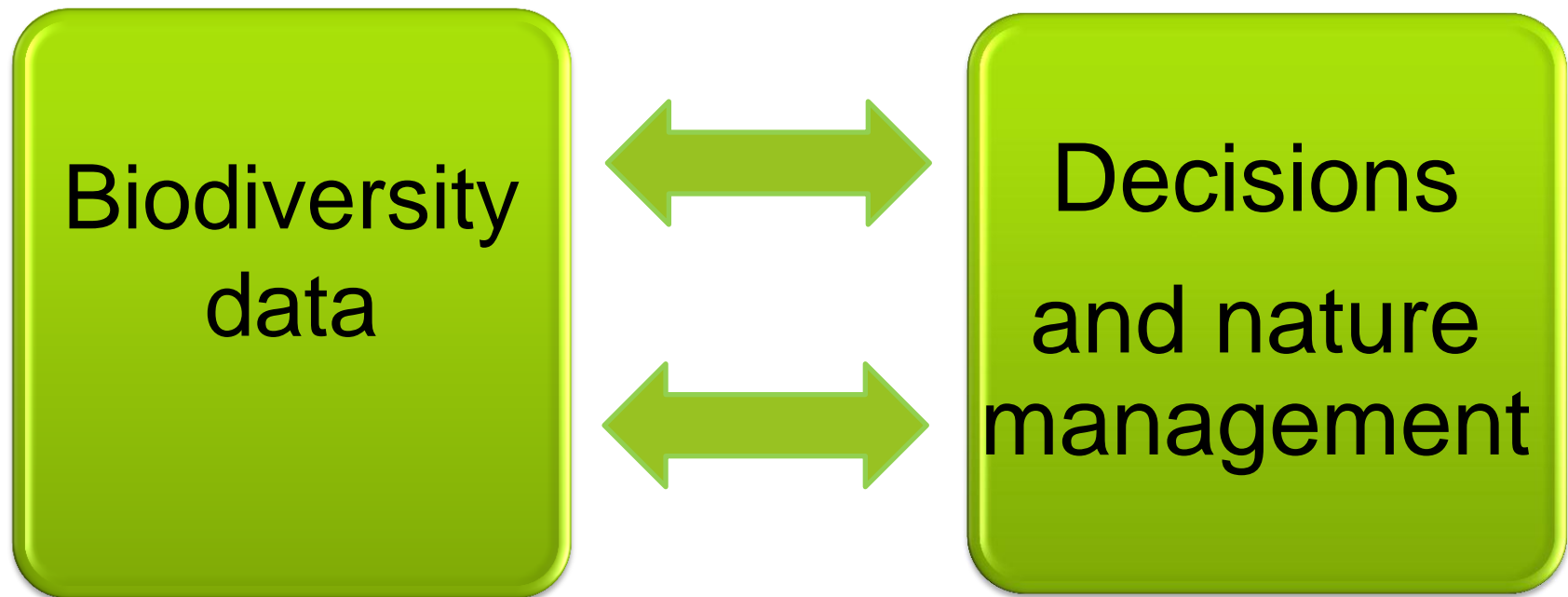


Conservation

53 species (Habitat and Bird EU Directive)

14 species (Natura 2000 Management Plan)





Initial situation analysis for Ljubljana Marsh Nature Park

- 1. Different quality of data (research, monitoring, inventory)**
- 2. Focus of decision makers and managers on Natura 2000 species**
- 3. Lack of uniform central biodiversity database for the area**
- 4. Lack of communication between decision-makers and data providers, and also between data providers**

Organigram of stakeholders involved in the data collection in the Ljubljana Marsh Nature Park

Fisheries
Research
Institute of
Slovenia

Slovenian
Environment
Agency

Slovenian
Museum of
Natural History

The Institute of
the Republic of
Slovenia for
Nature
Conservation

The Slovenian
Academy of
Sciences and
Arts

University of
Ljubljana,
Department
of Biology

National
Institute of
Biology

The Slovenian
Forestry
Institute

BirdLife Slovenia

Zospeum sp.

Centre for
cartography of
fauna and flora

Slovenian Society
for Odonata

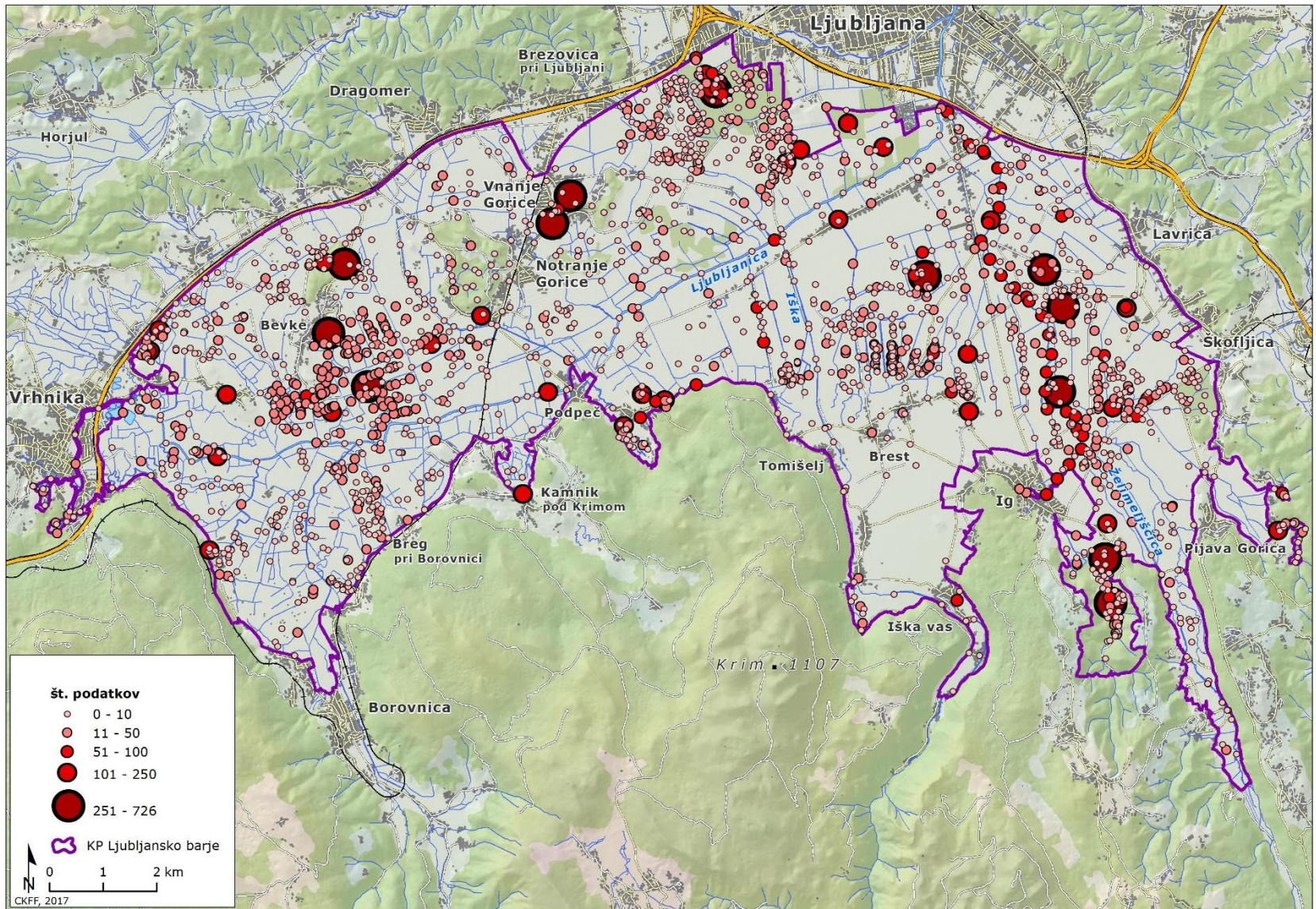
The Slovenian
Native Fish Society

Societas
herpetologica
slovenica

Slovenian
Association for Bat
Research and
Conservation

Association for the
study and
conservation of
butterflies

Botanical Society
of Slovenia



The needs

- 1. To gather biodiversity data that are at the moment scattered between different data providers**
- 2. To prepare the biodiversity information in a form applicable for decision makers**

Approach

1. To gather biodiversity data that are at the moment scattered between different data providers:

⇒ **Motivating and increasing the sensibility of data providers - TOOLS: BID-REX LSMs**



BID-REX LSMs:

-approximately 60 data providers were identified and informed about the objectives of BID-REX

The main positive feedback:

By gathering all existing data, the gaps in the knowledge will become more visible

– good for future planning (research and funding)

Approach

2. To prepare the biodiversity information in a form applicable for decision makers

Journal of Applied Ecology



Journal of Applied Ecology 2012, **49**, 986–997

doi: 10.1111/j.1365-2664.2012.02174.x

The biodiversity audit approach challenges regional priorities and identifies a mismatch in conservation

Paul M. Dolman*, Christopher J. Panter and Hannah L. Mossman

School of Environmental Sciences, University of East Anglia, Norwich, UK

Summary

1. Despite a strong uptake of evidence-based approaches, conservation often proceeds from a grossly incomplete understanding of species priorities. To optimize conservation impact within a biogeographical region, quantitative knowledge is needed of the species present, which should be prioritized, and the management interventions these require. The next challenge is to avoid a proliferation of competing species plans, or conversely, a lack of detail within generic habitat-based approaches.

2. We present a methodology for biodiversity auditing. We quantified regional biodiversity by systematically collating available species records, allowing objective prioritization. We collated autecological information to integrate multiple species into management guilds with shared requirements, providing evidence-based guidance for regional conservation.

3. For two regions of Eastern England, Breckland (2300 km²) and The Broads (2000 km²), we collated 0.83 and 1.5-million records, respectively. Numbers of species (12 845 and 11 067) and priority species (rare, threatened, designated or regionally restricted: 2097 and

A case of good practice

from University of East England

Species Audit

List of all species from
the area

Identification of regional
specialists

**Regional list of priority
species**



Management Audit

Database of ecological characteristics
of species

Determination of groups of species for
common management

Workshops for managers

Management plans

Some results from England

2 regions: 11.067 and 12.845 species → 1.357 and 2.097 priority species

Skupina	Proportion (%)	Proportion of priority species (%)
Glive	15,0	1,3
Lišaji	2,2	2,1
Alge	0,6	0,8
Mahovi	2,8	2,5
Higher plants	12,6	12,3
Mehkužci	1,2	0,7
Kolobarniki	0,2	0,1
Pajki	3,2	2,9
Stenice	3,6	3,0
Beetles	16,9	30,6
Metulji	13,1	5,6
Dipterans	16,5	19,9
Kožekrilci	4,1	4,9
Ostali členonožci	4,1	1,5
Ostali nevretenčarji	0,3	0,1
Ribe	0,3	0,4
Dvoživke in plazilci	0,1	0,4
Birds	2,7	10,1
Sesalci	0,4	0,8



Some numbers for Ljubljana Marsh

CKFF database – around 500 species

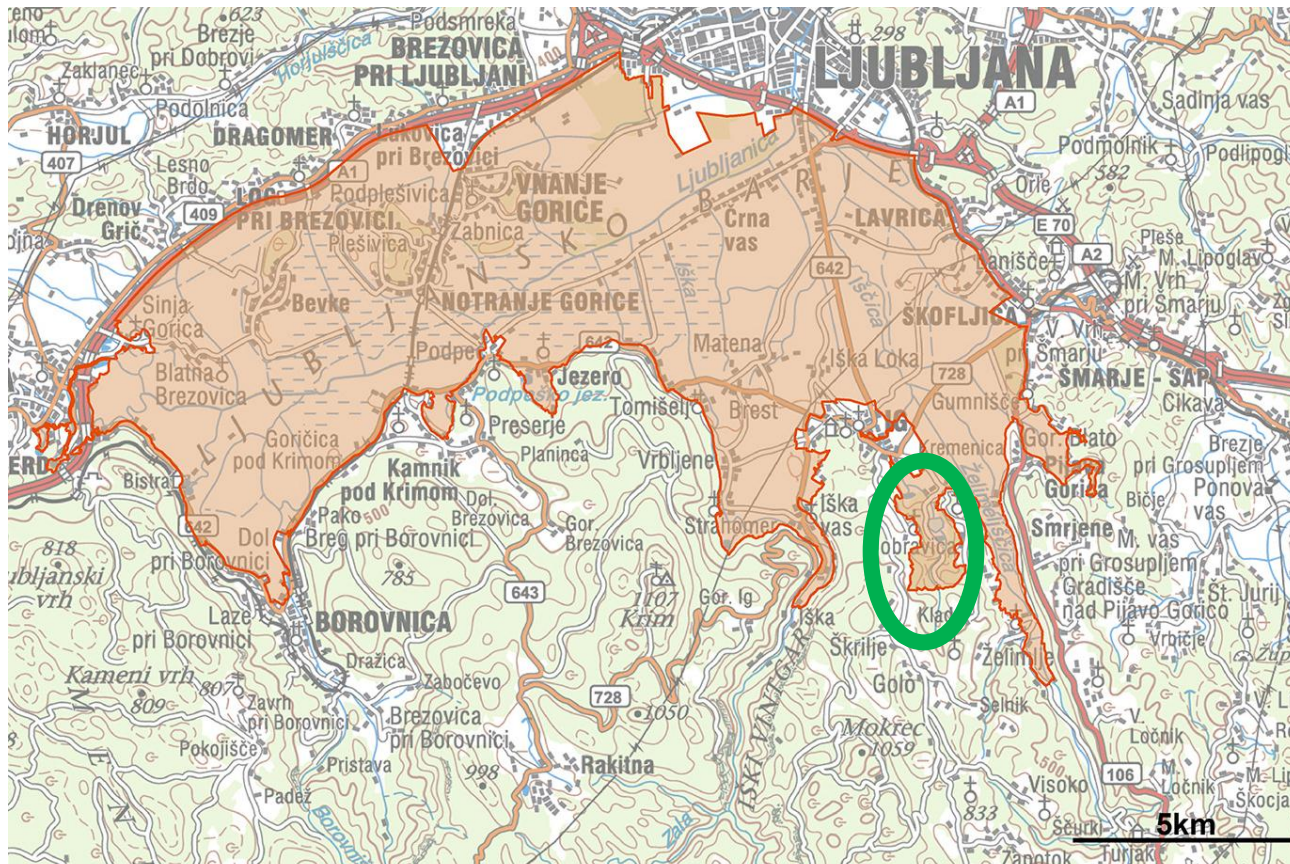
Private data collector - data just for Hoverflies (Diptera: Syrphidae) and thick headed flies (Diptera: Conopidae) – aprox 100 species

Private data collector data just for Lepidoptera - moths: 280 species

BirdLife Slovenia database – around 100 bird species

Some numbers for Ljubljana Marsh NP

135 km²

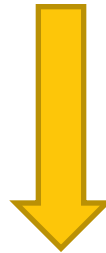


**Event
BIOBLITZ
Draga pri Igu,
19.5.2017**

**24 hours
118 experts
1 km²
1.470 species**

SUMMARY

List of all species from the area
Identify regional specialists



Regional list of priority species



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Thank you



www.interreg.eu/bid-rex