Towards a new national list of protected species in Latvia: LIFE FOR SPECIES project approach

LIFE19 GIE/LV/000857

Dmitry Telnov

Natural History Museum, London, UK

Institute of Biology University of Latvia, Rīga

Daugavpils University, Daugavpils, Latvia

Eesti kaitsealuste liikide nimekirjade kaasajastamine

Tartu, 22.i.2025

Image: https://www.nhm.ac.uk

"Each year sees the disappearance of thousands of plant and animal species which we will never know, which our children will never see, because they have been lost for ever. The great majority become extinct for reasons related to human activity."

Encyclical letter ***Laudato Si'*** (2015) of the Holy Father Francis on Care for our Common Home

In 2019, a landmark report has confirmed that humanity is destroying its own life support system, as the natural world faces unprecedented declines. **Every ecosystem around the world is affected by extinction**, from coral reefs and tropical rainforests to boreal forests and arctic tundra. The problem is accelerating with each passing day.

Around one million animals and plants species are threatened with extinction – more than ever before in human history. Over 40 % of amphibian species, ~ 33 % of corals and more than a third of all marine mammals are threatened. And it is humanity that is to blame, as **about 75 % of environments on land have been significantly altered by human actions, plus roughly 66 % of the marine environment**.

The sixth mass extinction. A mass extinction event is when species vanish much faster than they are replaced. This is usually defined as about 75 % of the world's species being lost in a short period of geological time - less than three million years.

Why LIFE FOR SPECIES?

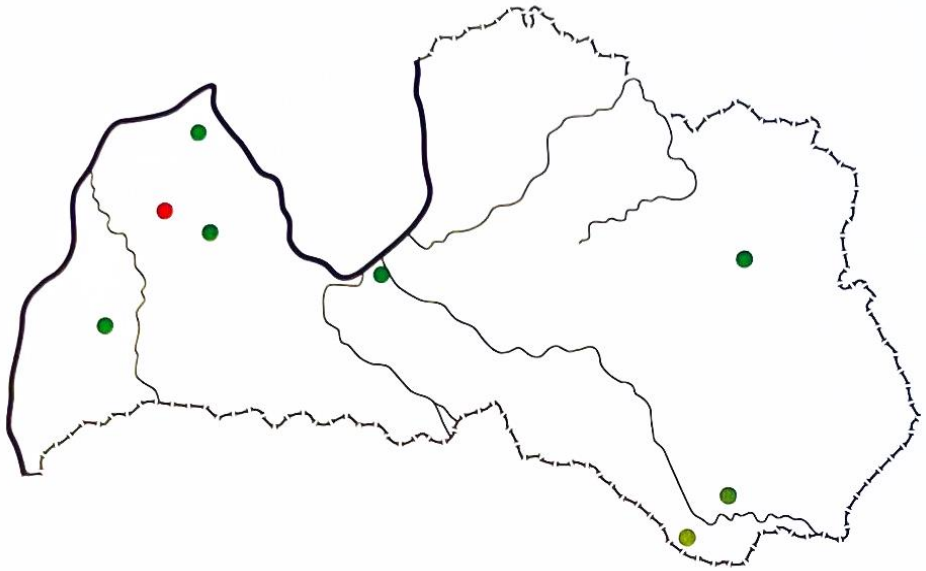
The present national regulations determining the lists of protected species and the ‘micro-reserve’ species in Latvia were issued > 20 years ago.

The current Latvian lists of protected species were developed under rather different socio-economic circumstances. The lists of protected species are scattered among six different legal acts.

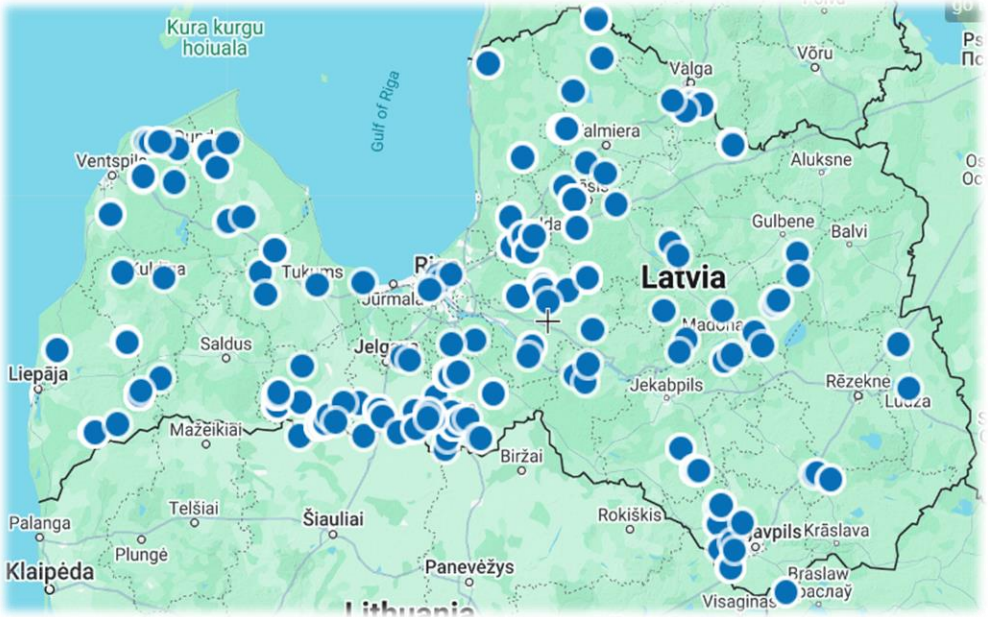
During that time significant changes have taken place in the Latvian economy, and valuable information on threats, occurrence and populations of species have been accumulated.

Protaetia marmorata (F.), one of the presently protected species

Image: G.Markevičius



The 1998 Red Data book



Present records (2022)

LIFE FOR SPECIES

Valsts reģionālās attīstības aģentūra

“Threatened species in Latvia: improved knowledge, capacity, data and awareness (LIFE for SPECIES)”

PROJECT LOCATION: Latvia

DURATION: 01.xii.2020 – 31.xii.2024

BUDGET:

Total amount: € 2 706 291

EC Co-funding 55 % (€ 1 488 458)
National co-funding 45 %, State Regional Development Agency (€ 1 016 961)

PROJECT’S IMPLEMENTORS:

Coordinating Beneficiary: University of Latvia (UL)

Associated Beneficiaries:

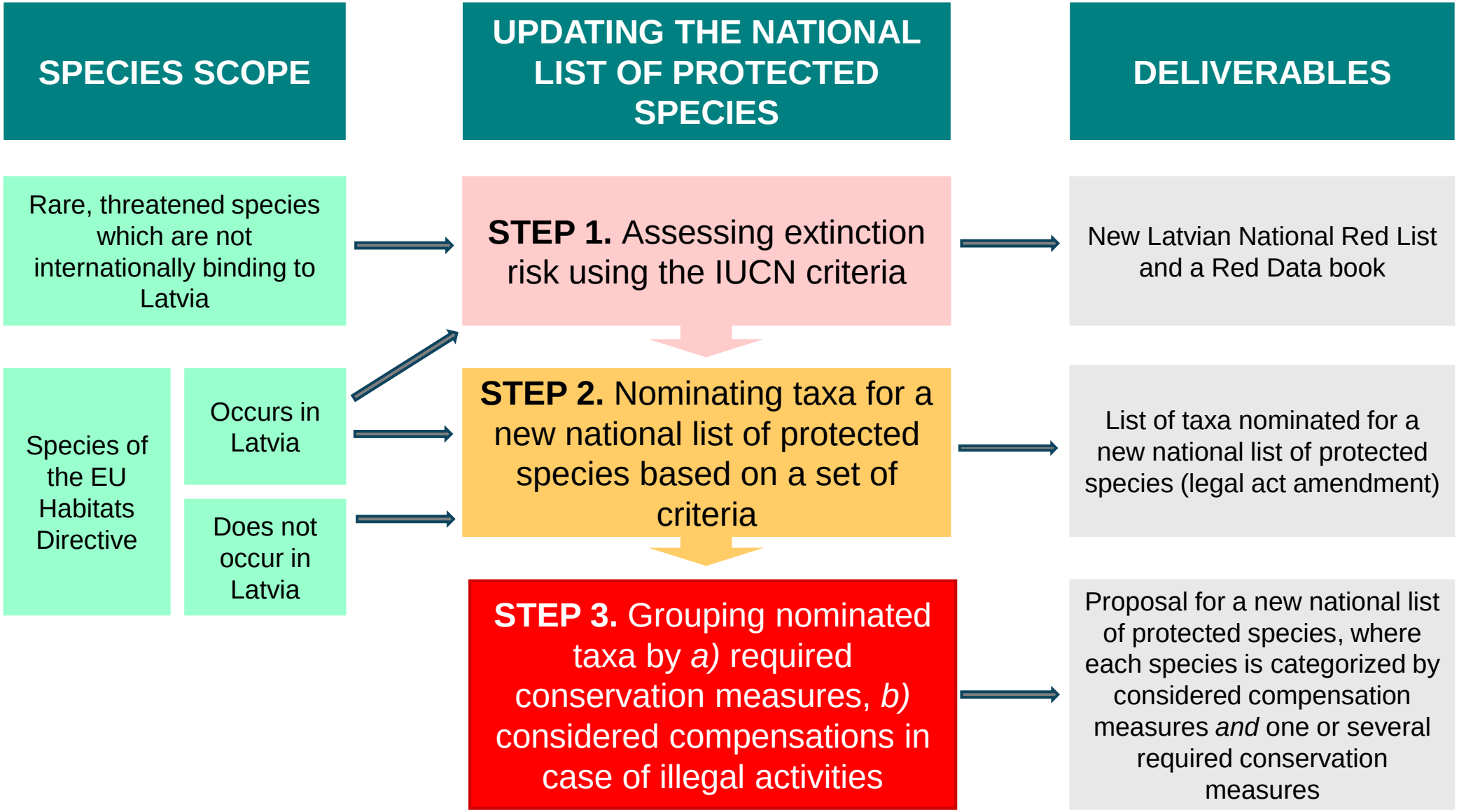
- **Nature Conservation Agency**
- **Daugavpils University**
- **Latvian Ornithological Society**

Source: *KHL Group*

Main aims of the “LIFE FOR SPECIES”

- **to evaluate and update the lists of protected and ‘micro-reserve’ species** (including proposals for legislative amendments, a **flexible system for adding / removing of taxa to / from the list** and improvements of the regulatory framework);
- **to assess species in accordance with the** transparent and approved **criteria defined by the International Union for Conservation of Nature (IUCN)**;
- **to compile data sheets for threatened species,** including data on their occurrence, biology, ecology, population dynamics, threats, and the measures required for their protection (**the new national Red Data Book**);
- **to improve the nature data management system ‘OZOLS’**, as well as the species monitoring methodology and data forms;
- to increase the competence of public administration institutions and species and habitats experts;
- to increase stakeholders’ involvement, raise understanding and awareness of the public, including landowners and managers.

Main phases & deliverables



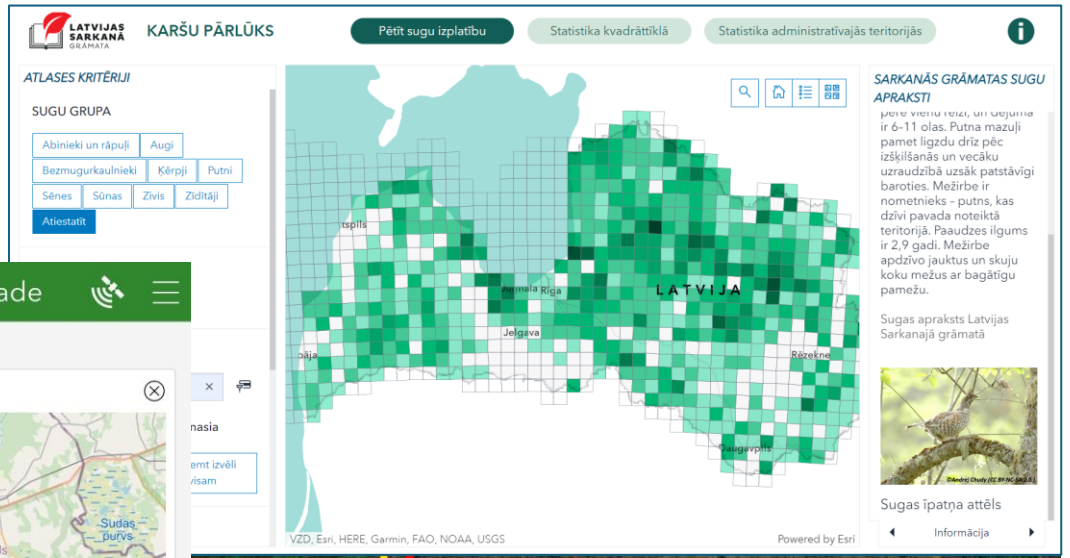
The national Nature Data Management system 'OZOLS' (‘tamm’) improved

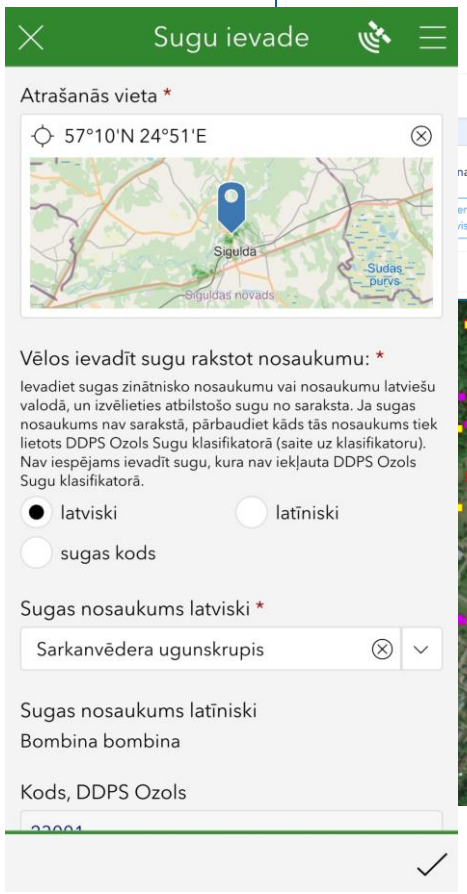
https://ozols.gov.lv/

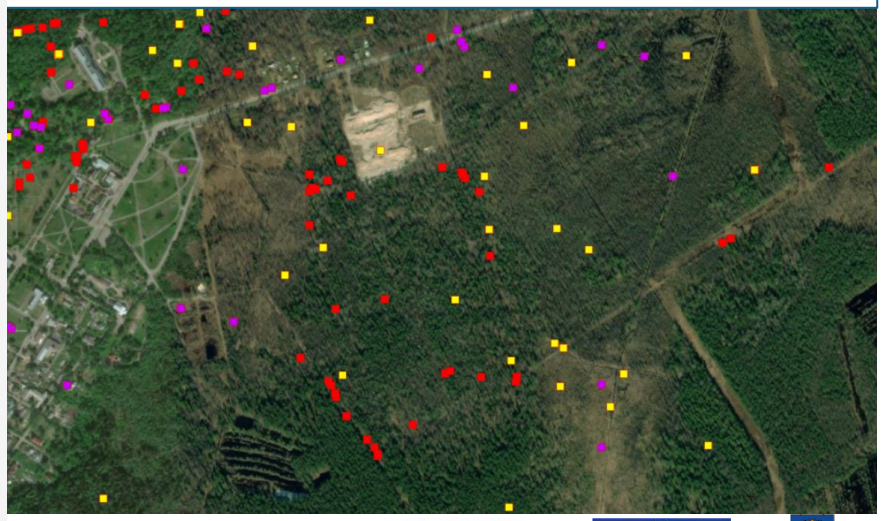
In Latvia, the information on the protected species is accumulated in the Nature Data Management System ‘OZOLS’, a state IS managed by the Nature Conservation Agency. ‘OZOLS’ collects textual and geospatial data on:

- protected nature territories and microreserves;
- protected species;
- protected habitats;
- management measures, inspections (performed and planned);
- nature tourism infrastructure;
- results of the biological diversity monitoring programme;
- other nature conservation relevant data.

Quality of > 100,000 records controlled manually and improved, including outdated taxonomy records and geospatial data;
New data input and quality control forms implemented;
Symbology implemented for accessibility;
New map browser for exploring data on threatened species.







LIFE FOR SPECIES - LIFE19 GIE/LV/000857

LIFE FOR SPECIES

Valsts reģionālās attīstības aģentūra

Communication and awareness

- A new Red Data Book website for Latvia: https://sarkanagramata.lv
- Project brochure, booklet, training materials for the public;
- >10 seminars involving stakeholders;
- Workshop for amateur nature photographers;

- > 45 radio & TV interviews;
- > 15 presentations or posters at international conferences;
- Transportable exhibition about threatened species at 21 sites;
- Three experience exchange trips (Estonia, Slovenia, Sweden).

LIFE FOR SPECIES

Valsts reģionālās attīstības aģentūra

Training seminars for nature conservation experts.

Combination of:
- lectures
- fieldwork - training
- workshops
- panel discussions etc.

In total, 19 seminars with 891 participants (384 persons).

31 public event about threatened species, ~ 1,000 participants.

The socio-economic impact assessment

The potential socio-economic impact of the project-driven changes to the national legislation, focusing on the updates of the protected species lists, was assessed for the first time in Latvia.

A quantitative analysis of socio-economic benefits and costs for the proposed changes was performed for two scenarios focusing on 229 to be protected species.

Public WTP for the preservation of protected species and their populations was calculated based on a survey.

Socio-economic benefits − **Socio-economic costs** = **Balance of benefits & costs**

+ societal benefits from preserving species richness / diversity
+ GHG emissions reduction due to reduced economic activity in agriculture
+ nitrogen pollution reduction due to reduced economic activity in agriculture

- reduction of economic incomes due to protection measures for newly added species
- costs related to the implementation of species protection measures

= "perpetual" benefits and costs streams, EUR

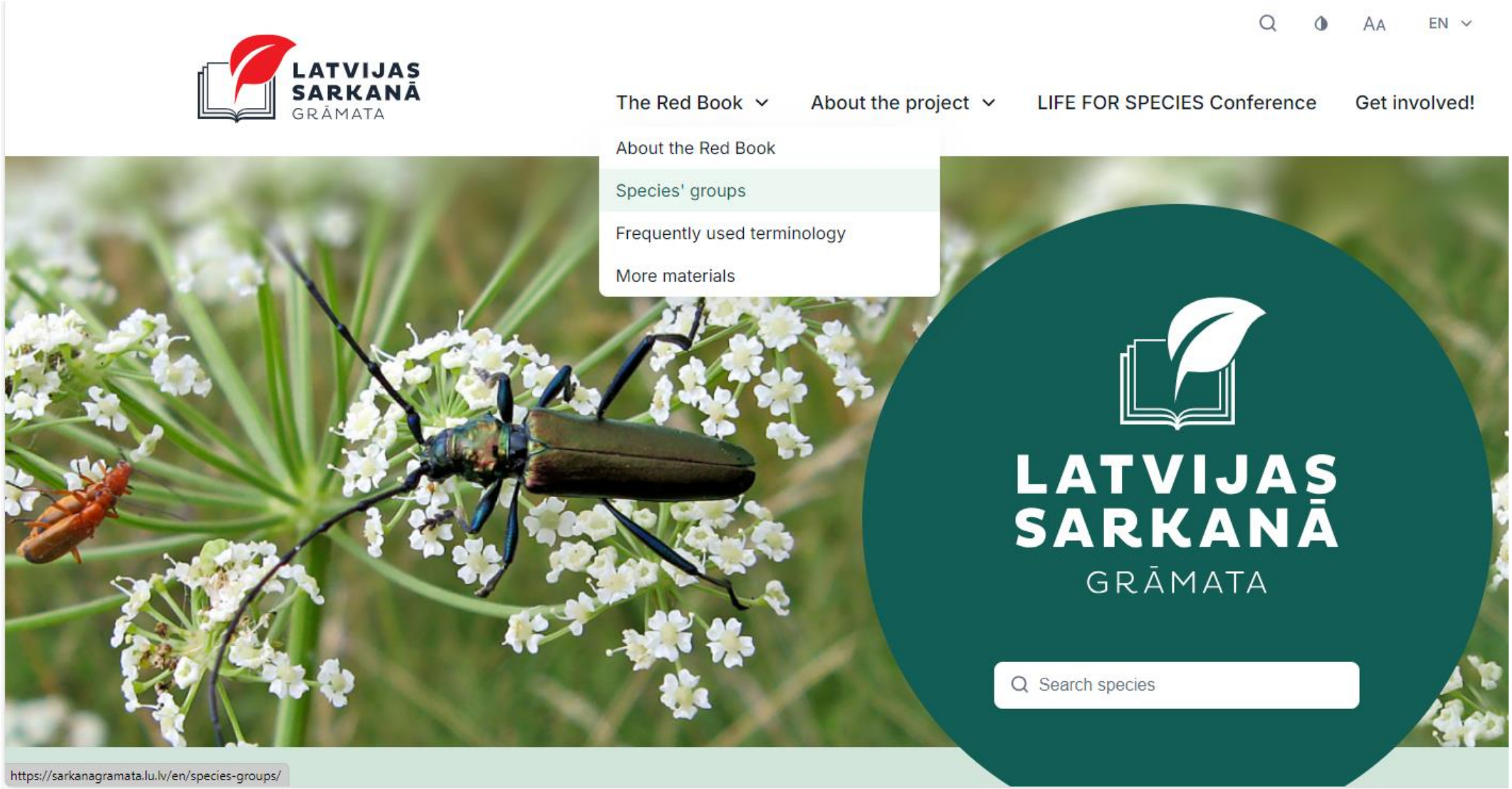
= benefits, costs difference

= equivalent annual annuity (EAA)

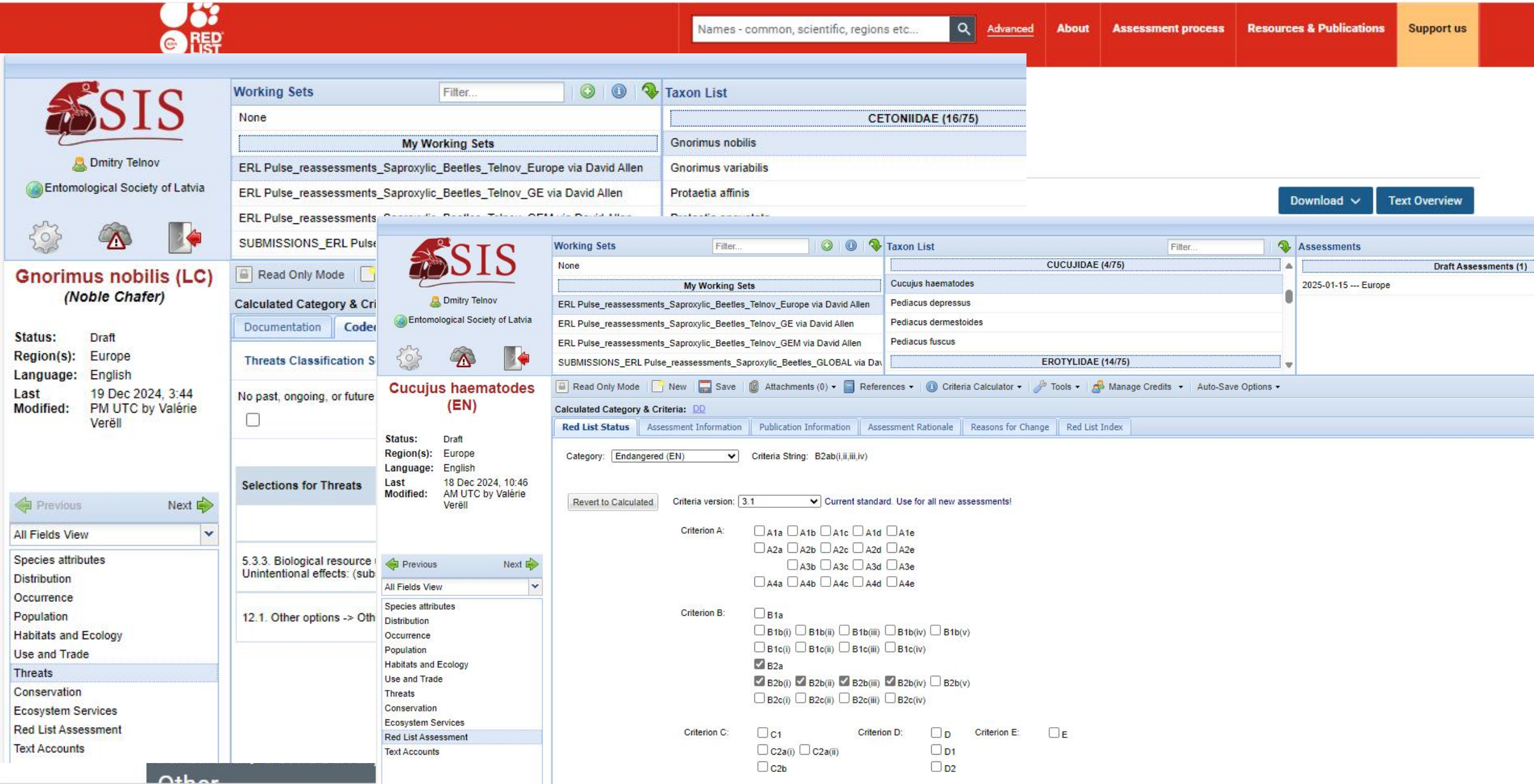
Calculated annual socio-economic benefits, costs and balance (EUR / year)

Group	Benefits, EUR	Costs, EUR	Balance, EUR
Vascular plants	39 244 727	1 904 305	37 340 422
Mosses	18 655 028	1 054 571	17 600 457
Lichens	36 750 152	99 836	36 650 316
Fungi & Myxomycota	56 568 384	176 009	56 392 375
Invertebrates	23 755 319	460 036	23 295 283
Fish	1 300 742	19 932	1 280 810
Amphibians & reptiles	891 295	10 317	880 978
Birds	88 512 565	7 595 865	80 916 700
Mammals	2 773 207	76 186	2 697 021
GRAND TOTAL	268 451 419	11 397 057	257 054 362

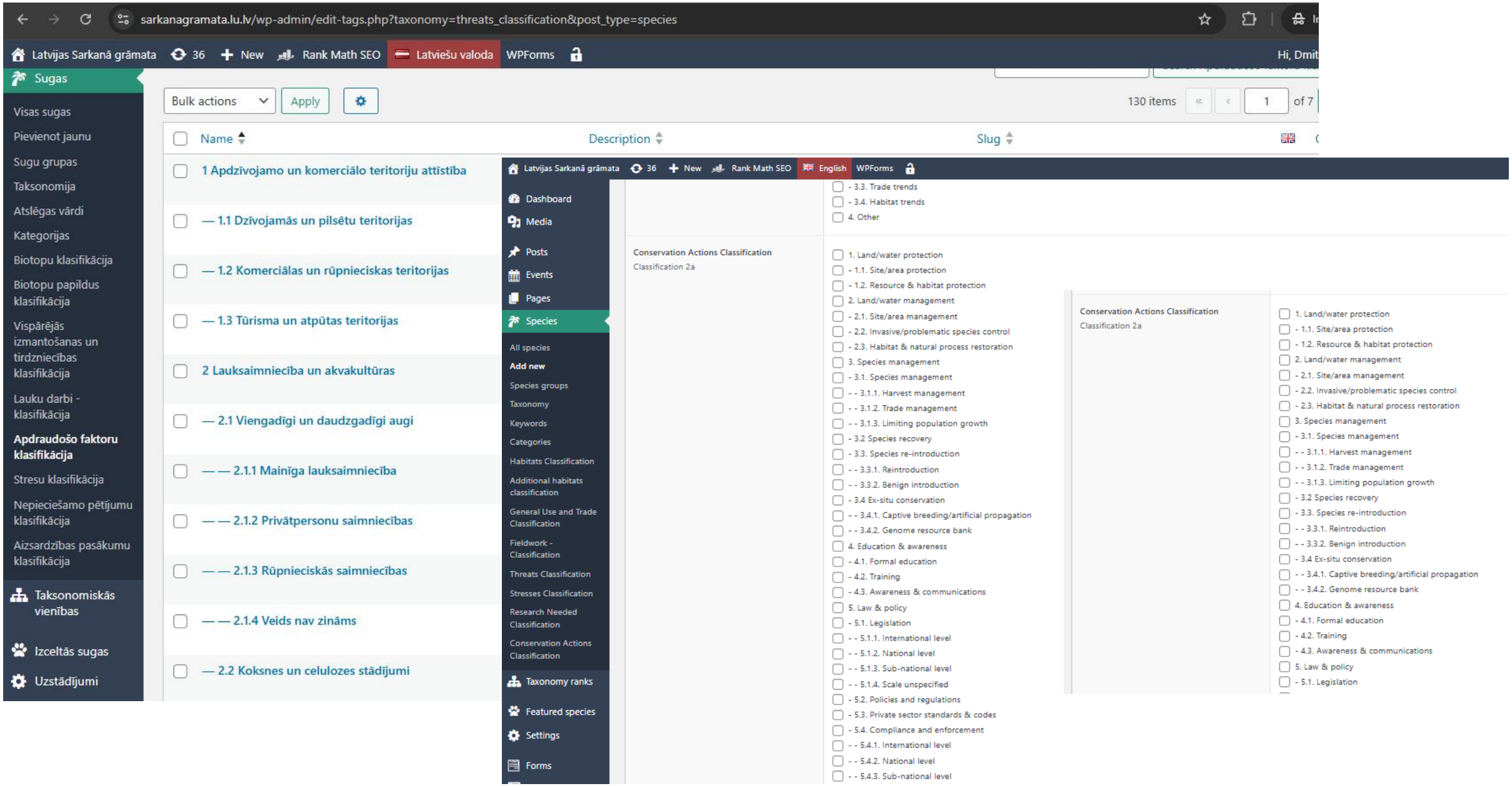
Bookmark the URL: sarkanagramata.lv/en



IUCN experience: the SIS



A new Latvian system for IUCN-based assessments



THE IUCN RED LIST
OF THREATENED SPECIES™

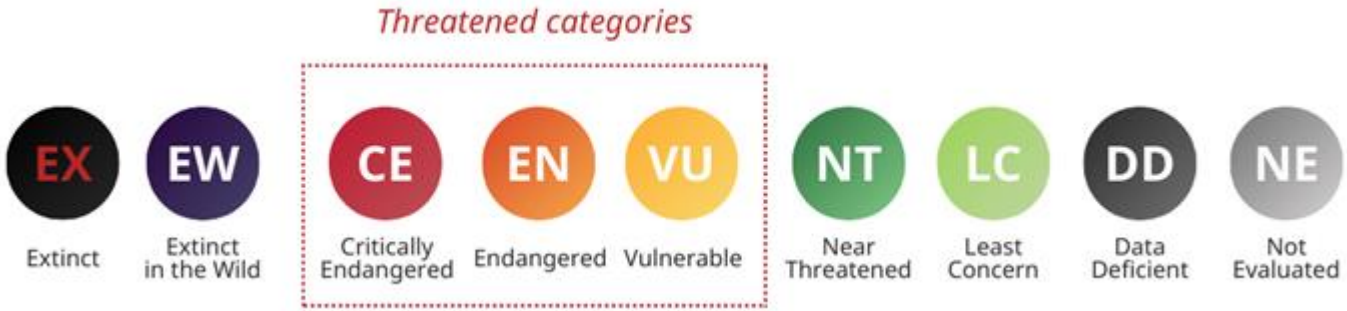
About | Assessment pro

Names - common, scientific, regions etc...

Adva

The Red List

The IUCN keeps a ‘Red List of Threatened Species’ also called ‘Barometer of Life’, many national governments do same. The Red List defines the severity and specific causes of a species’ threat of extinction. The Red List has seven categories, and each category represents a different threat level.



LIFE FOR SPECIES

Valsts reģionālās attīstības aģentūra

Red Lists are widely known as Red Data Books (RDB).

The first RDB of Latvia was published in 1985 in a single volume, the hitherto actual RDB – in five volumes in 1996–2003.

682 species are included in the last edition of the RDB – a sharp contrast to 231 species listed in the first edition.

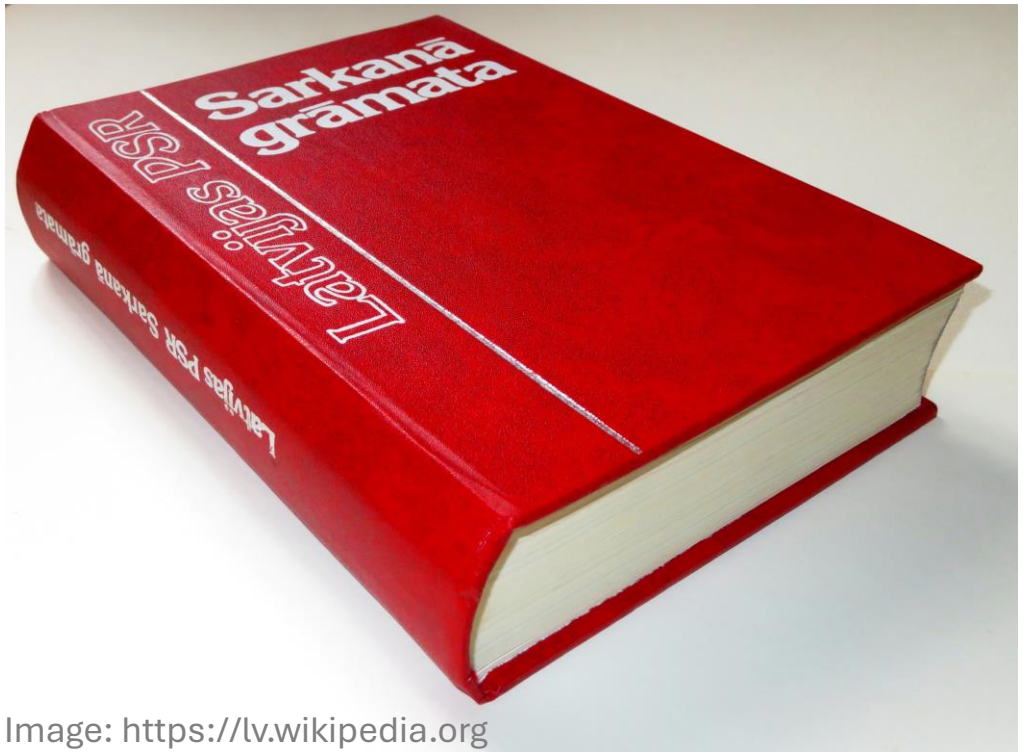


Image: https://lv.wikipedia.org

threatened

≠

protected

Image: https://sarkanagramata.lv

LIFE FOR SPECIES

Valsts reģionālās attīstības aģentūra

How were the species prioritized?

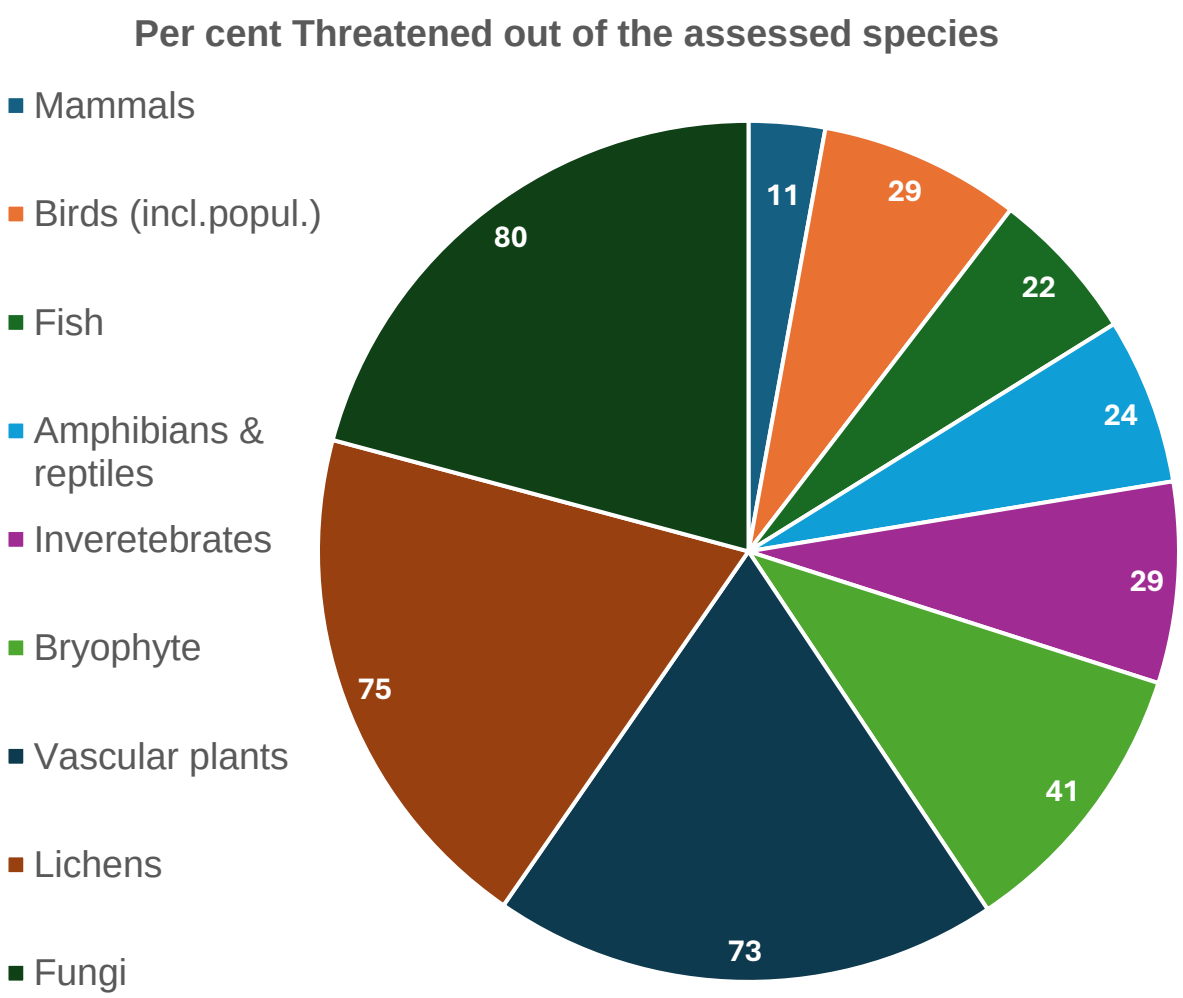
An invertebrates model

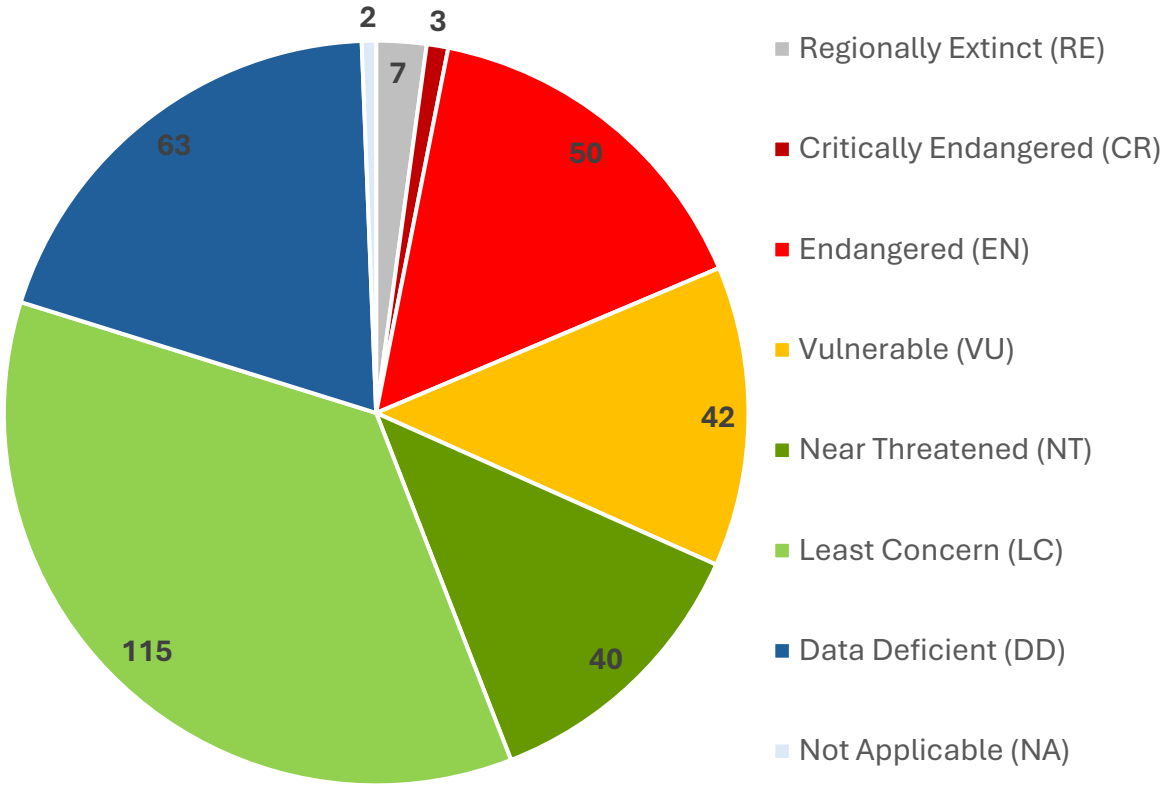
GROUP A (Criteria of Ignorance)	
criterion	*points*
A1 Invasive species in the EU	10
A2 Alien species in Latvia	10
A3 Cosmopolitan species	10
A4 Distribution in Latvia is marginal (EOO below a threshold of *xxx*)	10
Not qualifies for B2, B3, B8 and/or B10	10
A6 Threats unknown or cannot be determined	10
A7 Synanthropic species	10
A8 Vagrant or migratory in Latvia, no permanent population	10
A9 Expert not available and was not available for a long time and / or species is hard to distinguish	10

GROUP C	
criterion	*points*
Justified expert's opinion for the inclusion	10

GROUP B (Criteria of Inclusion)	
criterion	*points*
B1 Stenotopic species or bound to rare (in Latvia) substrate or resource	4
B2 Main part of Latvian population is bound to a habitat of the EU importance	2 / 4 / 6
B3 Redlisted by IUCN in Europe or globally a threatened species	4
B4 Red Data book of Latvia (1998) species	2
B5 Protected in neighbour country or Finland (1 point per country)	1 – 5
B6 Low dispersal abilities (2 / 4 points) or immobile populations (6 points)	2 / 4 / 6
B7 Umbrella or a habitat indicator species	4
B8 Endemic to the Baltic Sea catchment area	6
B9 Development takes 3 years or longer	2
B10 On the list of protected species in Latvia incl. binding international legal acts (conventions etc.) and A1 or A2 not applicable	10

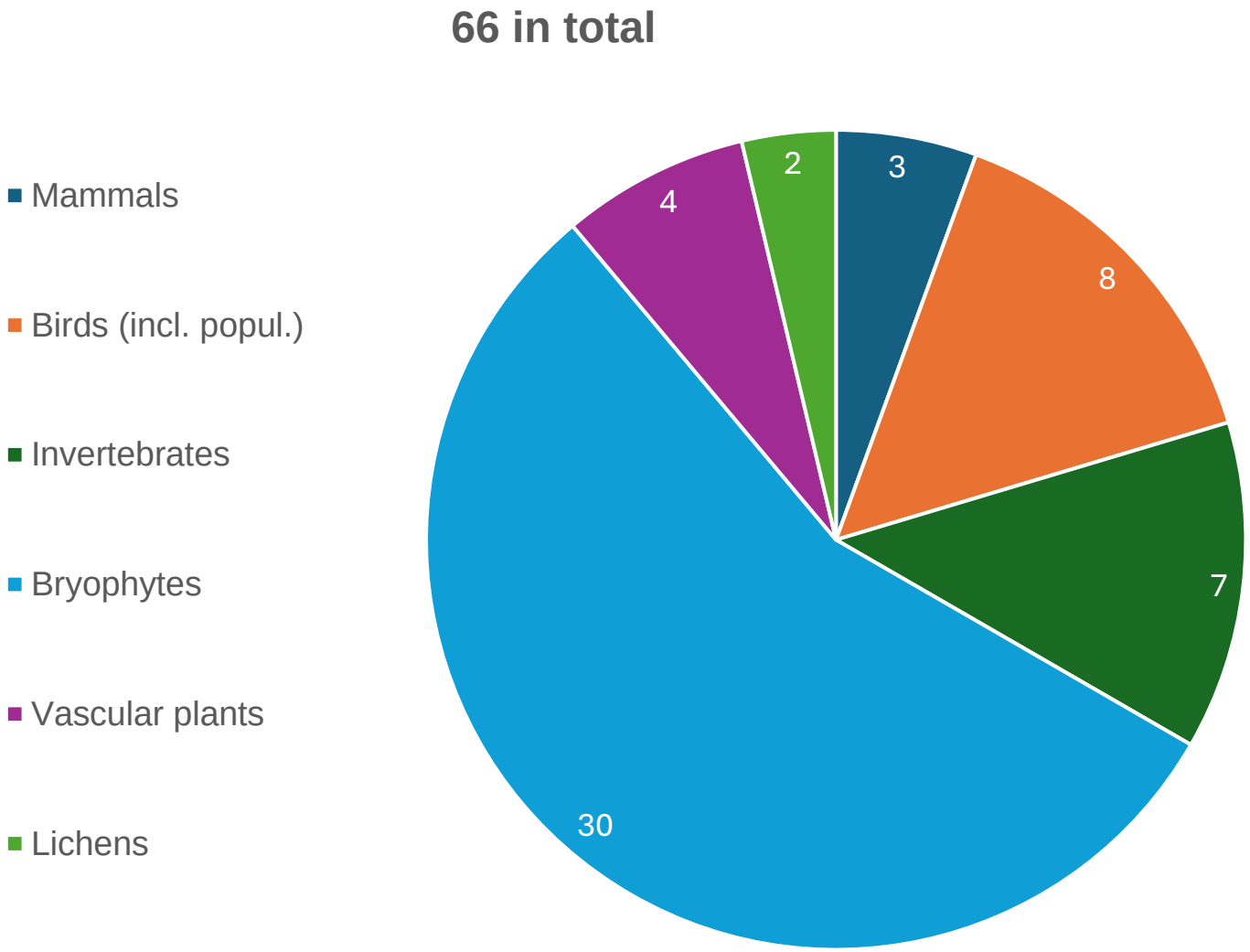
Threatened and stable species





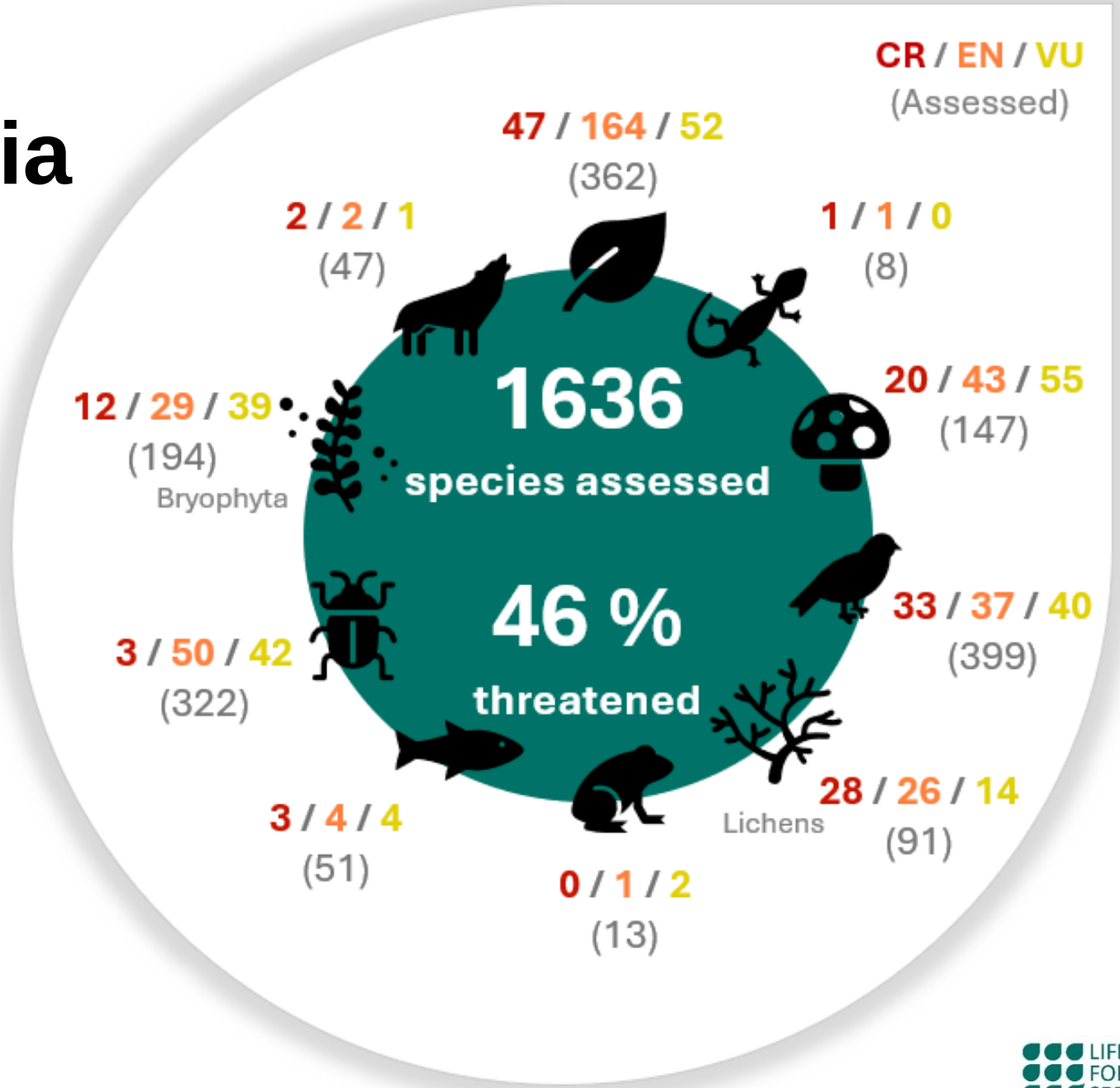
invertebrates only

Regionally Extinct (RE) species in Latvia



Threatened species in Latvia (2024):

a close-up



Towards the new, trustworthy list of protected species

A – CRITERIA BEYOND THE NATIONAL INFLUENCE

(impact factor 10 points)

A1 Species is on the international legal acts binding to Latvia

C – SUBJECTIVE CRITERIA

(impact factor 1–2 points)

C1 Species plays a part in a socio-economically important ecosystem service(s) 2 points

C2 Species in Latvia has an undoubtable public, cultural, or historical value 1 point

C3 Species *in situ* is hard to differentiate from another protected species 1 point

B – CRITERIA WITHIN THE NATIONAL INFLUENCE

(impact factor 2–6 points)

B1 Species in Latvia is assessed RE, CR, EN, VU or NT 6 / 4 / 2 points

B2 Long-term preservation of a species requires specific protection measures 4 points

B3 Species is assessed NT or higher on the European regional or global Red List of threatened species 4 points

B4 Species is or considered to be endemic to the Baltic Sea catchment basin, or species with disjunct distribution in Europe, or Latvian regional population is proportionally significant at the European regional or global scale 6 / 6 / 4 points

B5 A major part of Latvian regional population of a species is bound to a habitat in an unfavourable conservation status in Latvia or the EU 4 points

B6 Stenotopic species, or bound to a rare microhabitat, substrate, or food resource 2 points

B7 Latvian regional population of a species is below the threshold of a favourable status, or Latvian population is depleted 4 points

D – MANUAL EXCLUSION

D1 Determining protection regime is ineffectual (only applicable to B & C)

Application of the criteria on the draft list

B1

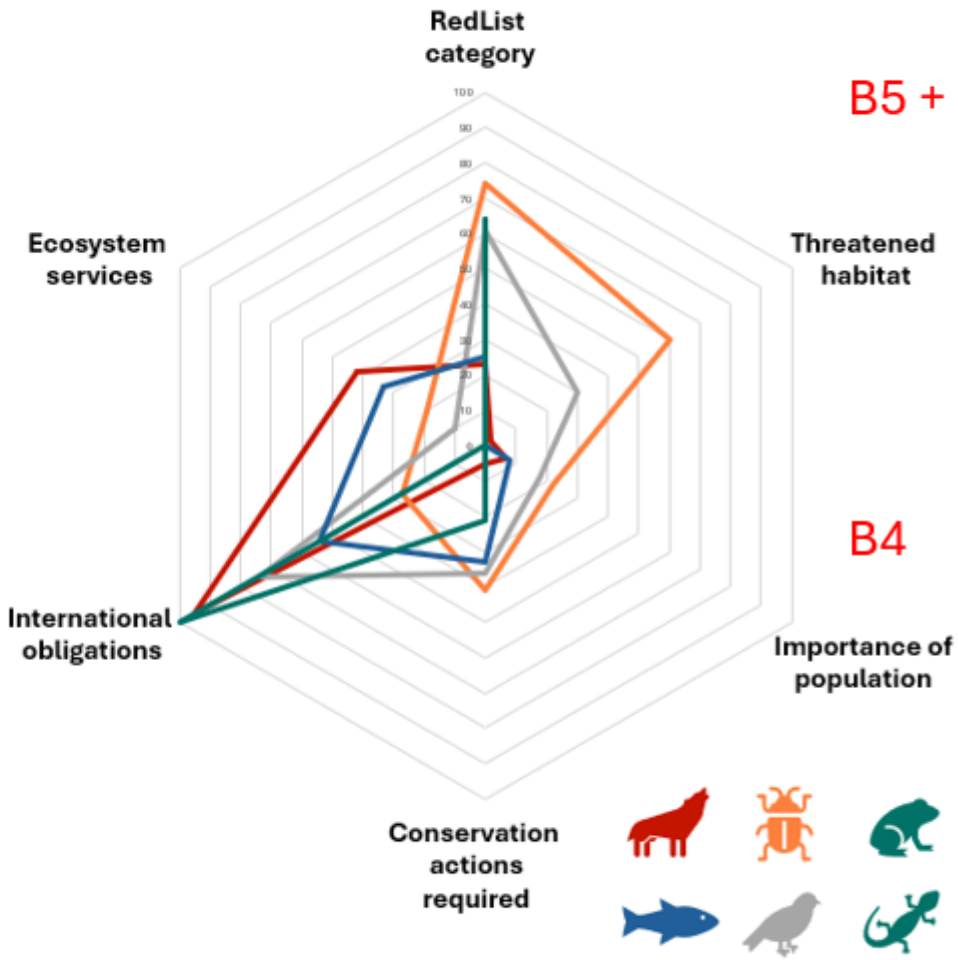
C1

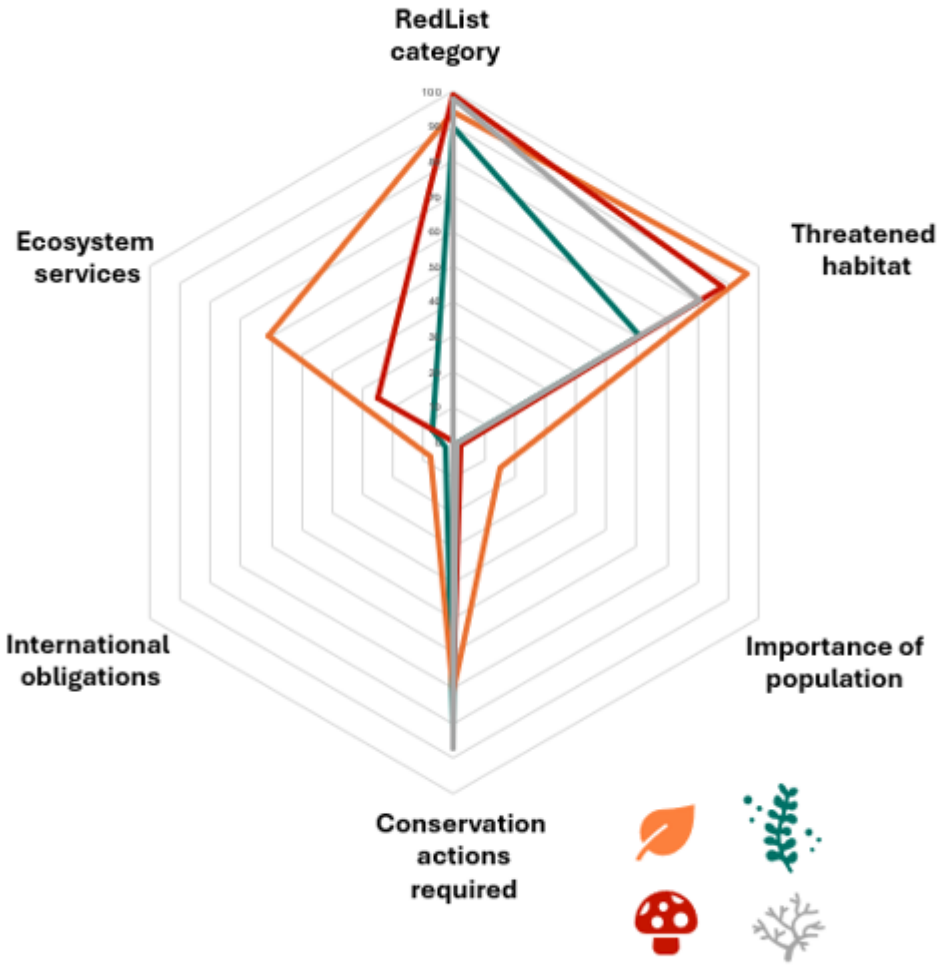
A1

B2

B4

B5 + B6





B group of criteria: self-sufficient or not?

B1 Species in Latvia is assessed RE, CR, EN, VU or NT

B2 Long-term preservation of species requires specific protection measures

B3 Species is assessed NT or higher on the European regional or global Red List of threatened species

B4 Species is or considered to be endemic to the Baltic Sea catchment basin, or species with disjunct distribution in Europe, or Latvian regional population is proportionally significant at the European regional or global scale (% of *xx*

B5 A major part of Latvian regional population of species is bound to a habitat in an unfavourable conservation status in Latvia or the EU

B6 Stenotopic species, or bound to a rare microhabitat, substrate, or food resource

B7 Latvian regional population of species is below the threshold of a favourable status, or Latvian population is depleted

Proposed changes to the national list

Group	Protected species (current)	Micro-reserve spp. (current)	EU Annex V (restricted use)	Totally (xii.2024)	Of them newly proposed
Vascular plants	232	145	4	**310**	**90**
Mosses	129	26	0	**134**	**21**
Lichens	60	35	0	**83**	**23**
Charophyta	6	1	0	**2**	**0**
Fungi & Myxomycota	62	12	0	**98**	**67**
Invertebrates	106	35	2	**125**	**45**
Fish	9	5	9	**23**	**15**
Amphibians & reptiles	9	5	0	**14**	**5**
Birds	99	31	4	**183**	**92**
Mammals	31	3	4	**43**	**12**
GRAND TOTAL	743	298	23	**1015**	**370**

An opportunity for a pan-regional co-operation…

"IUCN Members within a country or region may choose to organise themselves into National, Regional and Interregional Committees to facilitate cooperation among Members, and with other parts of the Union, and to support the participation of Members in the Programme and governance of IUCN" (National, regional and interregional committees | IUCN)

A call for a Baltic regional co-operation on redlisting and nature conservation

…demanded and justified by undeniable favour from the population

Acknowledgements

The presented material was prepared in the framework of LIFE project “Threatened species in Latvia: improved knowledge, capacity, data and awareness” (LIFE FOR SPECIES, LIFE19 GIE/LV/000857) with **financial support of the European Commission and the State Regional Development Agency, Republic of Latvia**.

This material is created with the financial contribution of the LIFE programme and the European Union. This material reflects only authors’ view. Neither CINEA (European Climate, Infrastructure and Environment Executive Agency) nor European Commission are responsible of any use that may be made, or the information contained therein.

Special thanks to Polina Degtjarenko (Looduskaitse planeerimise osakond, Tartu) for the opportunity to talk to you today and to **Gunta Čekstere-Muižniece** (LU Institute of Biology, Rīga) and **Jēkabs Dzenis** (Nature Conservation Agency, Sigulda) for the data used in this presentation and other kind of support.

LIFE FOR SPECIES

Life

Valsts reģionālās attīstības aģentūra

LATVIJAS UNIVERSITĀTE

abas aizsardzības pārvalde

DAUGAVPILS UNIVERSITĀTE

LATVIJAS ORNITOLOĢIJAS BIEDRĪBA

LIFE FOR SPECIES

LIFE FOR SPECIES - LIFE19 GIE/LV/000857

TÄNAN TÄHELEPANU EEST!

Valsts reģionālās attīstības aģentūra