



# National Red Lists for Species Conservation in Macedonia

*Setting the stage*

IUCN ECARO



## Funding

The work for this report was funded by the Global Environment Facility

## Disclaimer

The designation of geographical entities in this report, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN or contributory organisations, concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

### IUCN (International Union for Conservation of Nature)

Regional Office for Eastern Europe and Central Asia (ECARO)  
Dr. Ivana Ribara 91  
11073 Belgrade  
Serbia  
Tel: +381 11 2272 411  
[ecaro@iucn.org](mailto:ecaro@iucn.org)  
[www.iucn.org/ecaro](http://www.iucn.org/ecaro)

### United Nations Environment Programme

Key Dimitar Vlahov 4  
1000 Skopje  
The FYR of Macedonia  
Tel: +389 2 3128 500  
[www.unep.org](http://www.unep.org)

## UN Project

Achieving Biodiversity Conservation through Creation and Effective Management of Protected Areas and Mainstreaming Biodiversity into Land Use Planning

**Component 2:** Increased effectiveness of biodiversity management

**Outcome 2.1.1:** A 'Red List Index' for Macedonia is generated, reflecting the prioritized list of threatened species within the country adopted by the Government of Macedonia.

### Main beneficiary

Ministry of Environment and Physical Planning  
Bul. Goce Delcev no. 18  
1000 Skopje  
The FYR of Macedonia  
Tel: +389 2 3215 503  
Fax: +398 3220 165  
[www.moep.gov.mk](http://www.moep.gov.mk)

## Citation

IUCN ECARO. 2018. National Red Lists for Species Conservation in Macedonia: setting the stage. IUCN Regional Office for Eastern Europe and Central Asia, Belgrade, Serbia. pi-viii + 1-53

**Cover photo** © Dime Melovski – Balkan lynx (*Lynx lynx balcanicus*) – Critically Endangered

# CONTENTS

Acronyms and abbreviations .....	iv
Executive summary .....	vi
1 Introduction.....	1
1.1 The IUCN Red List of Threatened Species™.....	2
1.1.1 Red List or Red Book? .....	4
1.1.2 Red Lists: from raw biodiversity data to conservation policy and action .....	5
1.2 Regional and National Red Lists .....	5
1.3 The Red List Index.....	8
2 Red List and international frameworks .....	10
2.1 2030 Agenda for Sustainable Development.....	10
2.2 Convention on Biological Diversity.....	10
2.3 Bern Convention.....	12
2.4 EU Nature directives.....	12
2.5 CITES .....	13
2.6 Bonn Convention .....	13
2.7 Ramsar Convention .....	14
2.8 World Heritage Convention.....	14
2.9 Other international tools.....	15
2.9.1 Key Biodiversity Areas .....	15
2.9.2 Alliance for Zero Extinction .....	16
3 Red Lists and national species conservation .....	17
3.1 Laws and by-laws.....	17
3.2 Plans and strategies.....	17
3.3 The importance of Red Lists for institutions and stakeholders.....	18
4 Status of biodiversity information in Macedonia.....	20
4.1 Data needs for red-listing.....	20
4.2 Biodiversity information outlook.....	22
4.2.1 Algae .....	22
4.2.2 Fungi .....	23
4.2.3 Plants .....	23

4.2.4	Invertebrates .....	25
4.2.5	Fish.....	26
4.2.6	Amphibians.....	26
4.2.7	Reptiles.....	27
4.2.8	Birds.....	27
4.2.9	Mammals.....	28
5	Red-listing in Macedonia .....	29
5.1	Organising the red-listing process .....	29
5.1.1	Endemic taxa .....	31
5.2	Considerations for red-listing .....	32
5.2.1	Red Lists from the region .....	32
5.2.2	Red List methodology.....	34
5.2.3	Taxonomic rank .....	35
5.2.4	Taxon representation .....	35
5.2.5	Endemism .....	36
5.2.6	Native and non-native species .....	37
5.2.7	Assigning ‘Regionally Extinct’ (RE) and ‘Not Applicable’ (NA) .....	37
5.2.8	Spatial analysis and mapping requirements.....	38
5.3	Managing information flows .....	39
5.3.1	Collating raw biodiversity data.....	39
5.3.2	Red List assessment data management .....	41
5.3.3	Geographic Information Systems .....	42
6	Conclusions and recommendations .....	44
6.1	Chalking out the process .....	44
6.2	Recommendations.....	46
	References .....	50
	Appendix A.....	54
	Appendix B .....	56
	Appendix C .....	131
	Appendix D.....	162

## ACRONYMS AND ABBREVIATIONS

---

AEWA	Agreement on the Conservation of African-Eurasian Migratory Waterbirds
AOO	Area of Occupancy
API	Application Program Interface
AZE	Alliance for Zero Extinction
BISE	Biodiversity Information System for Europe
CBD	Convention on Biological Diversity
CE	Common era
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CR	Critically Endangered (IUCN Red List Category)
CSO	Civil Society Organisation
DD	Data Deficient (IUCN Red List Category)
ECARO	IUCN Regional Office for Eastern Europe and Central Asia
EMA	European Mycological Association
EN	Endangered (IUCN Red List Category)
EOO	Extent of Occurrence
EU	European Union
EUROBATS	Agreement on the Conservation of Populations of European Bats
EW	Extinct in the wild (IUCN Red List Category)
EX	Extinct (IUCN Red List Category)
GEF	Global Environment Facility
GIS	Geographical Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GSPC	Global Strategy for Plant Conservation
html	Hypertext mark-up language
IBA	Important Bird and Biodiversity Area
IPA	Important Plant Area
ISFC	International Society for Fungal Conservation
IUCN	International Union for the Conservation of Nature
KBA	Key Biodiversity Area
LC	Least Concern (IUCN Red List Category)
MAP	Medicinal and aromatic plant
MCF	Macedonian Collection of Fungi
MoEPP	Ministry of Environment and Physical Planning
NA	Not Applicable (IUCN Red List Category)

NBIS	National Biodiversity Information System
NBSAP	National Biodiversity Strategy and Action Plan
NE	Not Evaluated (IUCN Red List Category)
NGO	Non-governmental organisation
NISBD	National Information System for Biological Diversity
NRLWG	National Red List Working Group
NT	Near Threatened (IUCN Red List Category)
NTFP	Non-timber forest product
OBIS	Ocean Biogeographic Information System
ORF-BD	Open Regional Fund for South-East Europe – Biodiversity
PBA	Prime Butterfly Area
pdf	Portable document format
RE	Regionally Extinct (IUCN Red List Category)
RLI	Red List Index
SDG	Sustainable Development Goals
SEE	South East Europe
SIS	Species Information Service
SSC	Species Survival Commission
SSO	State Statistical Office
TDWG	Taxonomic Databases Working Group
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
VU	Vulnerable (IUCN Red List Category)

## EXECUTIVE SUMMARY

---

In the frames of a GEF-funded, UN Environment-led project, IUCN ECARO was tasked with the component for developing national Red Lists in Macedonia. The current report aims to set out the framework within which the Red List development in Macedonia will take place, and to provide a starting point and guidelines for the process.

### The IUCN Red List

The IUCN Red List of Threatened Species™ is the world's most comprehensive information source on the **global conservation status** of animal, fungal and plant species and their links to livelihoods. It uses a set of five Criteria that are applicable across taxonomic groups to **categorise species according to their extinction risk**. Red List species assessments are peer-reviewed to guarantee their scientific rigour. Although the Red List is not a priority list *per se*, it is often used to inform local, national and international conservation policy and actions. When a taxonomic group has been assessed at least twice with a number of years in between, a **Red List Index** can illustrate the relative rate at which the group has changed its overall projected relative extinction risk. The Red List Index is an informative index for conservation planning that builds on the Red List concept.

### Red Lists and policy

At the international level, many **multilateral environmental agreements** (e.g. the UN Sustainable Development Goals, the Convention on Biological Diversity, the Convention on International Trade in En-

dangered Species) base their strategies and monitoring on the Red List status of selected species. A number of internationally recognised **conservation prioritisation tools** such as Key Biodiversity Areas also consider the presence and level of endangerment of red-listed species. And at the regional level, **international legislation** (e.g. the EU Birds and Habitats directives, Bern Convention) uses the Red List in a similar way.

### Regional and National Red Lists

Because a species **extinction risk is often not constant** across its global range, Red List assessments at the regional level can provide more relevant information for its conservation. In addition, many international agreements require signatory countries to develop policy and action at the national level. Regional and national Red Lists are thus useful tools for smaller scale conservation. (When a region is delimited by national borders, we talk about a national Red List.). Such assessments need to account for neighbouring populations and non-resident taxa, and **may differ from the global assessments**. Only when a species is endemic to the country, does its national assessment constitute its global assessment.

### The Macedonian setting

In Macedonia, the **Law on Nature Protection** provides the legal framework for the development of Red Lists and subsequent conservation measures, and includes lists of Protected and Strictly protected species. Red Lists have been on the conservation agenda at least since the first **Na-**

**tional Biodiversity Strategy and Action Plan** (NBSAP) in 2004, and are considered of highest importance in the current drafts of the updated NBSAP of 2014 and the **National Strategy for the Conservation of Nature** (2016).

### **Biodiversity information outlook**

In order to conduct national Red List assessments, information is used on species' taxonomy, endemism, geographic range, population size, life history, habitat and ecology, use and trade, threats and on-going conservation actions. Research and conservation have gathered considerable amounts of data, but substantial **data gaps** remain for all taxonomic groups (Algae, Fungi, Plants, Invertebrates, Fish, Amphibians, Reptiles, and Mammals). In addition, the available data is stored and managed in a **decentralised** way, making it difficult to access. However, not all information needs to be present for Red List assessments to be conducted, and mechanisms to deal with data quality are included in the methodology.

### **The red-listing process**

Because the process for developing national Red Lists differs from the global IUCN Red List at multiple stages, several decisions need to be taken to **set the context** within which the red-listing process will take place. IUCN guidelines for national red-listing exist, but additional information on the general process of creating a national Red List, such as dealing with taxonomy, databases, and peer review, are not readily available. For this, a group of experts will act as a **steering body** for national Red Lists within this project, and possibly beyond.

Over 22,500 species occur in Macedonia, and not all can be assessed within the project's time frame. The process of **selecting species** for Red List assessment is a two-stage process. First, a ranking exercise is done to get a priority ranking of the larger taxonomic groups, which guides the steering body to select the taxonomic groups. The steering body then appoints assessor teams for each selected taxonomic group. The assessor team members suggest which species within their taxonomic group are to be assessed, and will conduct the actual assessments. Before the assessments, a number of assessors attend an intensive **Red List Assessor course** by IUCN. The assessments are then reviewed by external reviewers and published in a national Red List website and as species fact sheets. As assessments are produced, the data is entered and managed in a national data management structure (see below). The assessments for **national endemics** need to follow the submission process to the global Red List because their national assessments are also global assessments. In the process, a clear definition of what constitutes a national endemic is important, both because the responsibility for the conservation of an endemic lies with the national authorities and because the assessment procedure differs from the one for non-endemics. That is, near-endemic species have to be assigned either national or regional endemic status.

### **Data management**

As assessments are conducted, a **national data management structure** to enter and store the assessment data needs to be



established. This can take either one of three forms: (i) a national database adapted from the IUCN global **Species Information Service**, (ii) a national Red List database template by the National Red List Working Group, or (iii) using the global Species Information Service with a 'Macedonia'-tag attached to the assessments. The decision lies with the Red List steering body. In addition, all **spatial analysis and mapping** requires specific capacity, which needs to be taken into account when planning assessments.

### Documenting the process

Several national Red Lists from the region suffer a lack of **credibility** because the process of obtaining the lists is not described in sufficient detail. It is important for the Macedonian Red Lists to avoid this pitfall and document every step along the way. The latest European Regional Red Lists are a good example. Important decisions to **document** are, among others, the selection process of taxonomic groups and species,

the use of the 'Not Applicable' category, definition of endemism, definition of native and non-native species, data management structure, data model used, and publication type. In addition, the feasibility of the spatial analysis and mapping requirements need to be taken into account while conducting the assessments.

### Translating into policy and action

An important purpose of Red Lists is to **inform policy and conservation** action, i.e. the Red Lists are expected to yield a list of recommendations for adjusting policy documents (e.g. the lists of Protected and Strictly protected species), as well as for focusing research, monitoring, conservation, and outreach activities.

The tasks ahead are significant, and will pose numerous challenges. It is hoped that the current document may serve to guide direction, and hence contribute in as far as it can to an improved set of species protection tools in Macedonia.

# 1 INTRODUCTION

---

The need for Red List assessments across a broad range of taxonomic groups has been on the conservation agenda in Macedonia for several years. The need has been recognised by academia, NGOs and governmental agencies alike, and has been acknowledged explicitly in national legislation. Although the existence of preliminary Red Lists for certain species groups shows the motivation of the conservation community to move the red-listing process forward, significant progress has been hampered so far by lack of successful fundraising efforts.

Mid-2017, an opportunity was created to start implementing a red-listing initiative in Macedonia. The initiative aims to support national authorities, research institutes, academia, civil society and experts to prepare national Red Lists for Macedonia. It forms part of the overarching project *“Achieving Biodiversity Conservation through Creation and Effective Management of Protected Areas and Mainstreaming Biodiversity into Land Use Planning”*, which is funded by the Global Environment Facility (GEF) and managed by UN Environment. The Eastern Europe and Central Asia Regional Office (ECARO) of the International Union for Conservation of Nature (IUCN) was engaged to implement outcome 2.1.1: *“A ‘Red List Index’ for Macedonia is generated, reflecting the prioritized list of threatened species within the country adopted by the Government of Macedonia”* of the project’s second component entitled *“Increased effectiveness of biodiversity management”*.

In the frames of this initiative, IUCN ECARO compiled the current report to paint the framework within which the Red List development in Macedonia will take place, and to provide a starting point and guidelines for the process. **The first specific aim of this report is to discuss the significance of the Red List for international agreements and legislation, and for the national legal and technical framework in Macedonia. A second aim is to present an overview of the available information regarding species conservation, including challenges and opportunities for conducting Red List assessments in Macedonia, leading to a set of recommendations relevant to the national context.**

In this introduction, a general background is provided on the IUCN Red List of Threatened Species™, the difference between global, regional and national assessments, and the Red List Index. The significance of the Red List for international frameworks is presented in Chapter 2, and for national conservation frameworks in Chapter 3. In Chapter 4, the availability of biodiversity information in Macedonia compared to the data needs for Red List assessments is considered, and Chapter 5 outlines the envisioned Red List process in Macedonia within the time frame of the current project. The concluding Chapter 6 considers the challenges and opportunities arising from the previous chapters, and provides recommendations.

## 1.1 The IUCN Red List of Threatened Species™

The IUCN Red List of Threatened Species™ (hereinafter just 'IUCN Red List') is the world's most comprehensive information source on the global conservation status of animal, fungal and plant species and their links to livelihoods. Its goal is to catalyse action for biodiversity conservation by providing information and analysis on the world's species, including threats, and population status and trend. The IUCN Red List lists species according to their estimated risk of global extinction. Species are assigned one of nine threat Categories (see Figure 1 and Table 1). These Categories indicate the conservation status of the species, whereby species that are categorised as Critically Endangered, Endangered or Vulnerable are considered to be *threatened* species, i.e. their extinction is imminent.

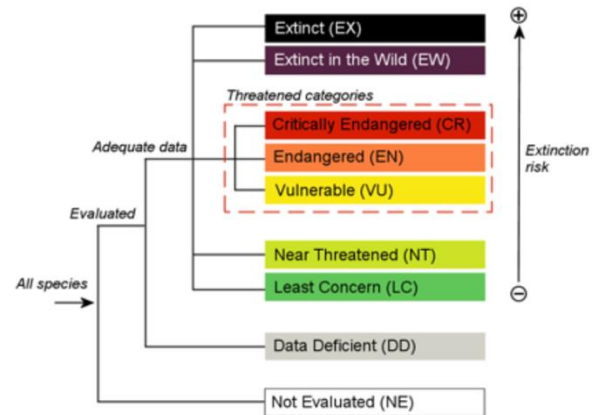


Figure 1. Structure of the IUCN Red List Categories

Table 1. Definition of IUCN Red List Categories.

Category	Clarification
EXTINCT (EX)	A taxon is Extinct when, after exhaustive surveys, there is no reasonable doubt that the last individual has died.
EXTINCT IN THE WILD (EW)	A taxon is Extinct in the Wild when, after exhaustive surveys, it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range.
CRITICALLY ENDANGERED (CR)	A taxon is Critically Endangered when the best available evidence indicates that it is facing an extremely high risk of extinction in the wild, based on it meeting any of the criteria A to E for Critically Endangered.
ENDANGERED (EN)	A taxon is Endangered when the best available evidence indicates that it is facing a very high risk of extinction in the wild, based on it meeting any of the criteria A to E for Endangered,
VULNERABLE (VU)	A taxon is Vulnerable when the best available evidence indicates that it is facing a high risk of extinction in the wild, based on it meeting any of the criteria A to E for Vulnerable.
NEAR THREATENED (NT)	A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.
LEAST CONCERN (LC)	A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.

Category	Clarification
DATA DEFICIENT (DD)	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status.
NOT EVALUATED (NE)	A taxon is Not Evaluated when it has not yet been evaluated against the criteria.

To assess the conservation status of species, the IUCN Red List uses a set of five Criteria (A-E) related to population size, geographic range, and rates of decline that are applicable across the whole taxonomic range of species (see Box 1, and more details in Appendix A). The Categories and Criteria are intended to be an easily and widely understood system for classifying species at high risk of global extinction. The general aim of the system is to provide an explicit, objective framework for the classification of the broadest range of species according to their extinction risk, and applying the system to a species eventually yields an objective, comprehensive summary of its conservation status. The Criteria are developed for quantitative evaluation of extinction risk, but allow for several levels of uncertainty to be accounted for in the assessment process.

The IUCN Red List is an official scientific publication by IUCN, i.e. the IUCN Red List website is in fact a scientific journal, and the regular updates constitute the journal's publications. Thus, Red List assessments need to follow proper scientific practice and are subject to peer-review. To get the Red List assessments published as scientifically valid papers, a typical global Red List assessment process generally consists of five steps:

1. *Pre-assessment*: an overview of available information for the species to be assessed is compiled.
2. *Assessment*: the available information is used to assess the extinction risk of the species according to the IUCN Criteria and to assign the relevant Category. This step is done by Red List Assessors, who are usually experts on certain taxonomic groups. The assessment process is thoroughly documented, such that decisions and assumptions can be evaluated during the review process.

#### Box 1 – IUCN Red List Criteria

**Criterion A** evaluates whether a reduction in population size of 30% or more has occurred over 3 generations or 10 years (whichever is longer). The reduction can be measured from any point in the past to any point in the future, depending on available data, and may be inferred from habitat or exploitation data. The larger the reduction is, the higher the threat category will be.

**Criterion B** evaluates whether the geographic distribution of the species is small and/or fragmented, taking into account any continuing declines in distribution, population size or habitat extent and/or quality.

**Criterion C** requires that the population size of the species is small from the onset, and takes into account continuing declines, as well as the spread of the individuals over subpopulations.

**Criterion D** is used for evaluating species that have an extremely small population size (e.g. <1000 worldwide), and typically have a very restricted geographic distribution.

**Criterion E** uses a quantitative analysis of the extinction risk of a species. The higher the probability for the species to become extinct within certain frames, the higher its threat category will be.

3. *Review and consistency check*: the assessment is checked for proper application of the Criteria, proper application of scientific standards and consistent interpretation of Red List terms and definitions.
4. *Submission*: the assessment is submitted to the IUCN Red List Unit, where a last consistency check is performed and the assessment is prepared for publication on the IUCN Red List website.
5. *Publication*: the IUCN Red List is updated at pre-set intervals and any newly submitted assessments will be published during the next update.

The process for IUCN global Red List assessments generally follows this procedure strictly, and requires the use of all relevant guidelines available from IUCN. National or regional Red List assessments conducted by IUCN partners or independent projects can adjust the process and are not required to follow the IUCN guidelines (see Section 1.2 on p5). However, the Red List methodology and guidelines have been tested for many years, and the IUCN Red List is widely recognised as the single-most comprehensive, robust and accessible way of evaluating the conservation status of species across the whole taxonomic spectrum.

### 1.1.1 Red List or Red Book?

---

The first Red List efforts date back to 1964 when lists of rare mammals and birds were drawn up (IUCN, 2017a). In these early days of the IUCN Red List, there was clear distinction between a Red List and a Red Book. The Red List was a list of species that are threatened by extinction according to a clear set of Criteria (e.g. [Red List of threatened animals 1996](#)), which contained at least two columns: one with the binomial species name and one with the code indicating the Category and the Criteria that were met. Often it would include a column that listed all countries where the species occurred. A Red Book, or also Red Data Book, on the other hand was a book that explicitly contained much more details about the species and the reasons why it was assigned a particular Category in addition to the same information comprised in the Red List. However, in recent times, with the advances in database development and online platforms, the distinction between a Red List and a Red Book is fading. The global IUCN Red List that is currently hosted online is *de facto* a global Red Book which is published digitally instead of in printed format. Red List assessments that are published on the IUCN Red List website contain all the information and references that are required to trace back the justification of the Category that was assigned. That is, they contain all the information that would be included in a Red Book, and are in fact fully-fledged, peer-reviewed scientific publications that conform to all scientific standards. Thus, to produce a Red List assessment that is scientifically valid and accepted by everyone, one needs to collect and consider all information that goes into a Red Book. Therefore, the distinction that is traditionally made between a 'Red List' and 'Red Data Book' as works of different quality and quantity is essentially unnecessary. Throughout this report, the term 'Red List' should be interpreted in its inclusive meaning (i.e. explicitly including all assessment information) unless specified otherwise, while the term 'Red Book' will be used simply to refer to a printed version of such a Red List.

### 1.1.2 Red Lists: from raw biodiversity data to conservation policy and action

---

Red Lists are a great communication tool to reach out and inform the general public of the status of biodiversity across the globe or within a specific region. They provide information summaries useful for scientific analyses and can be used by industrial developers to identify areas to be avoided for planned developments. Red Lists are being used to guide management of natural resources across scales: from local Environmental Impact Assessments and the development of national policies and legislation (e.g. transport, energy, National Biodiversity Strategies and Action Plans), to the identification of important species in the frames of multi-lateral agreements (Rodrigues et al., 2006).

At the national level, Red Lists provide crucial information for devising or updating species conservation or habitat and site-based conservation legislation. Given the generally very limited funding for conservation, prioritisation is a key step ensuring the efficient use of the available resources. Red Lists are widely used to help identify conservation priorities.

In addition, Red Lists are a necessity for reporting progress towards conservation goals set on the national or international level. They are a powerful tool to help summarise raw biodiversity information into a categorization that is meaningful for reporting and management purposes (see section 5.3 on p39). For example, conservation measures may be evaluated as successful when the extinction risk of a threatened species has been reduced so much that its classification as threatened is no longer needed. Or the coverage of a protected area network might be considered sufficient if it includes a certain percentage of the geographic range of one or more endangered species (see section 2 on p10). Similarly, changes in Category or number of threatened species may help guide conservation management action (Rodrigues et al., 2014). For these purposes, Red Lists are extremely valuable tools that bridge the gap between raw data and the indicators used to track progress against targets set in policies.

*Note – A Red List assessment by itself should not be considered an indication of a species' conservation priority. That is, if a species is listed as Critically Endangered, it does not necessarily follow that it should be prioritised in species conservation policy and projects. The Red List status of a species informs specifically about its expected extinction risk, which constitutes only one part of the wider information that is needed for setting conservation priorities. For example, prioritisation may take into account factors such as endemism, phylogenetic rarity, practical concerns about the size of the effect that conservation measures may have, or just the overall costs involved in conserving a particular species.*

## 1.2 Regional and National Red Lists

---

The value of the global IUCN Red List of Threatened Species is widely recognised. It is extensively used as a tool for guiding policy at international levels, e.g. for the Convention on Biological Diversity, the Bern Convention, the Convention on Migratory Species, the Convention on Trade in Endangered Species, and others (Rodrigues et al., 2006; Zamin et al., 2010). Most of these international policy instruments require the development of species protection legislation

and policies on the regional or national level in order to implement the global strategies. For this, assessments that evaluate extinction risk at the regional or national level generally provide more relevant information than the global assessment. Additionally, regional or national assessments are expected to play an increasingly important role for developing national, as well as global species- and ecosystem-based strategies for climate change adaptation (Zamin et al., 2010). Thus, regional or national Red Lists are a valuable tool for national and international conservation policies and strategies alike.

The planning and producing of the national Red Lists is the responsibility of the relevant national bodies. This includes the pre-assessment (data gathering), as well as conducting, reviewing, checking and publishing species assessments. In principle national assessments are not published on the global IUCN Red List website, and hence theoretically do not necessarily need to follow the guide-

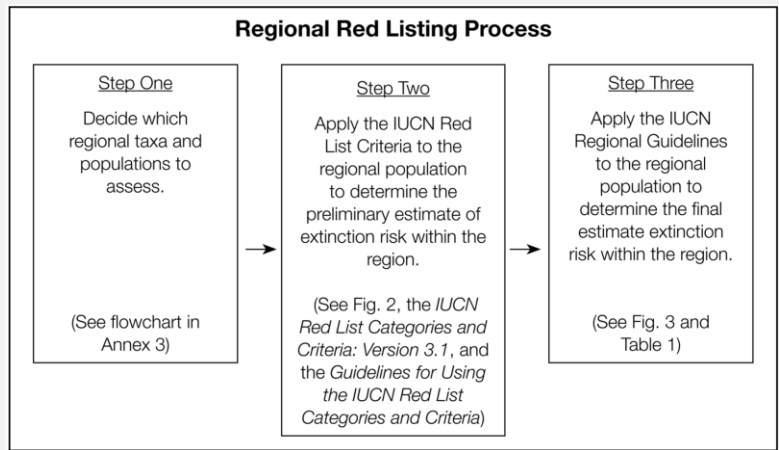
*Note – A national Red List can in fact be considered to be a special case of a regional Red List, where the region of interest is defined by a country's boundaries. Throughout this report, when mentioning regional Red Lists, we henceforth imply also national Red Lists.*

lines set out for the global red-listing process. (Nationally endemic species are an exception here, as their national assessment essentially constitutes the global assessment and therefore qualifies for review, consistency checks and publishing by the IUCN Red List Unit, which manages the global IUCN Red List.) In exceptional cases, a national Red List could simply consist of an unaltered subset of the global IUCN Red List encompassing those species that reproduce within the country or at any stage regularly visit the country (IUCN, 2012a). This may be feasible for example when a country has a high number of endemics or threatened near-endemics, or when there currently is a pronounced overall deficiency of data pertaining to species' status within the country. However, in many cases this approach is not desirable, for example because a national assessment may assign a very different threat category to a species than the global assessment. This happens when the extinction risk of a certain species is not uniform across its entire global range and its geographic distribution does not line up with political boundaries. Differences between the globally estimated extinction risk of species and that of the regional or national populations are very common. For example, the brown bear (*Ursus arctos*) is categorised as Least Concern at the global level (McLellan et al., 2017), but is listed as Vulnerable in most of South East Europe (SEE) and as Critically Endangered in those areas of western Europe where it has not been extirpated (McLellan et al., 2016). Such regional differences in extinction risk can render the global assessments inappropriate and warrant the use of regional Red Lists to inform policy on the regional level, rather than relying on the global assessment (Azam et al., 2016).

In the last decades, a surge in national and subnational Red List assessments has resulted in different methodologies used across localities, countries and regions, which complicates the integration of and synergy between assessments for larger scale evaluations of species groups and multi-scale mapping of threats (Azam et al., 2016). The need to streamline methodologies used in local, national and regional Red List assessments has been recognised, and for the sake of compatibility of smaller scale Red Lists with neighbouring lists or larger scale lists, the use of the global IUCN Categories and Criteria is recommended (Zamin et al., 2010).

However, conducting national Red List assessments gives rise to a number of complications in the Categories and Criteria used for the global Red List assessment, because the geographical context changes from the global to a much smaller scale (IUCN, 2012a). For example, a population of a widely distributed species that is being assessed regionally may be influenced by neighbouring populations of the same species outside the region. Therefore, the Red List Category obtained for the region may have to be adjusted to account for such influence. Similarly, populations that are resident in the region only during certain periods of the year (e.g. breeding season) need to be assessed taking into account their conservation status in the area where the species resides throughout the rest of the year. For these reasons, regional or national Red Lists should follow a slightly modified assessment approach, comprising three steps. First, the necessary thresholds are set to determine which taxa will be included in the assessments. Second, the IUCN Categories and Criteria (IUCN, 2017b) are used to preliminary assess species, and third, the Guidelines for Regional and National assessments (IUCN, 2012a) are applied to adjust the preliminary assessments where necessary, and obtain the final Category (see Box 2). Only when a species is endemic to the region, or a population is completely isolated from other populations outside the region, can it be assessed by applying the unmodified Criteria and Categories of the IUCN Red List.

**Box 2 – Regional Red Listing Process**



Source: (IUCN, 2012a)

Furthermore, the change in geographical scope necessitates the creation of two new Categories (see Table 2). These Categories are added to the regular Red List Categories and result in a total of 11 possible Categories to be assigned in national and regional Red List assessments (see Figure 2). These Categories will be of relevance for the national Red List assessments in the context of the current project.

**Table 2. IUCN Regional Red List Categories, summarised from IUCN (2012a).**

Category	Clarification
REGIONALLY EXTINCT (RE)	A taxon is Regionally Extinct when it is extinct within the region but extant in other parts of the world.
NOT APPLICABLE (NA)	A taxon may be categorised as Not Applicable in a number of cases: widespread taxa that occur at very low numbers in the region, taxa occurring only in captive populations, invasive species, or vagrants.



To improve linkages between national red-listing efforts and the IUCN Red List, the IUCN Red List Committee has established a National Red List Working Group (NRLWG), the Chair of which is currently held by the Zoological Society of London. The NRLWG works on tools to help national red-listing efforts, which are often based on adapting the tools available for global red-listing processes to better suit national needs (see also section 5.3.2 on p41). Their website, [www.nationalredlist.org](http://www.nationalredlist.org), provides an overview of the complete national red-listing process and lists many existing national Red Lists from countries across the world.

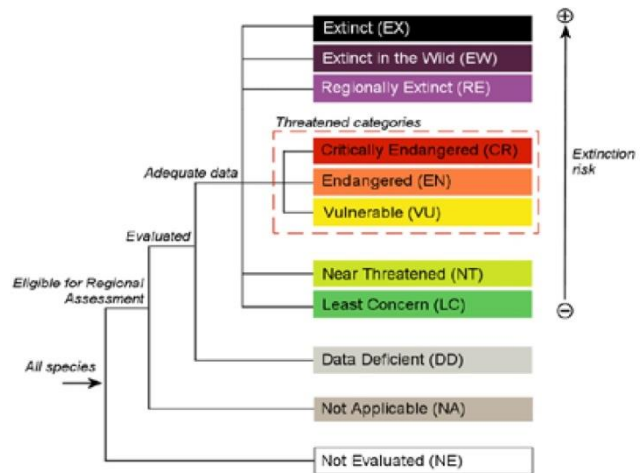


Figure 2. Structure of the IUCN Regional Red List Categories

### 1.3 The Red List Index

A Red List Index (RLI) illustrates the relative rate at which a particular set of species have changed their overall projected relative extinction risk as quantified by Red List Categories over a period of time (Butchart et al., 2005, 2004). Red List Indices can be calculated for any representative set of species that has been fully assessed at least twice. They are based on the number of species in each Red List Category, and the number changing categories between assessments as a result of genuine improvement or deterioration in status. RLIs show a fairly coarse level of resolution, but for fully assessed taxonomic groups they are highly representative, being based on information from a high proportion of species worldwide. The first RLI for the world's birds showed that their overall threat status has deteriorated steadily during the years 1988–2004 in all biogeographic realms and ecosystems (Butchart et al., 2004).

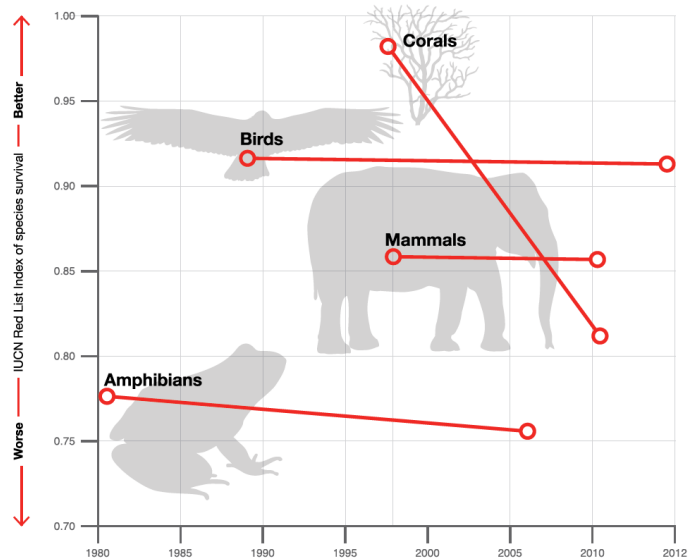


Figure 3. Global IUCN Red List Index for corals, birds, mammals and amphibians. Amphibians are most threatened and have experienced a noticeable decline (hence an increased combined extinction risk), while birds and mammals show a slight decline, and corals have experienced a drastic decline.

With further refinement of the RLI methodology (Butchart et al., 2007), the Red List Index has become a useful tool for reporting conservation success, that extends the reporting function

of Red Lists (see Figure 3). For example, it has been used to check progress against global biodiversity targets (see section 2 on p10) and to evaluate to which extent countries or regions are contributing to the improvement (or deterioration) of a species group's threat status (Rodrigues et al., 2014). In other words: are countries or regions protecting their fair share of species? Rodrigues et al. (2014) found that >50% of the global deterioration in the conservation status of birds, mammals and amphibians is concentrated in <1% of the surface area, 39/1098 ecoregions (4%) and eight/195 countries (4%) – Australia, China, Colombia, Ecuador, Indonesia, Malaysia, Mexico, and the United States. Such information helps to distribute the burden of species conservation fairly among the species range countries. Once a country has established how much of the global population of a certain group of species it hosts within its boundaries, a Red List Index for this species group can be used to evaluate to which extent the country is responsible for the deterioration or improvement of the group's conservation status. This shows the power of the Red List Index as an informative tool for policy and management at different spatial scales, from local to global.

## 2 RED LIST AND INTERNATIONAL FRAMEWORKS

---

Substantial and well-elaborated overviews of international biodiversity-related conventions and legislation are given in the draft National Biodiversity Strategy and Action Plan (MoEPP, 2014a) and the draft National Strategy for Nature Conservation (MoEPP, 2016). The aim of this chapter is to give an overview of how the Red List is relevant to the most important international species conservation conventions, agreements, and strategies that apply to the Republic of Macedonia. In general, many species lists across all conventions depend on IUCN Red List assessments, which reflects the Red List's importance for the conservation planning and reporting in the frames of international policy documents. Note that the frameworks listed here do not represent an exhaustive list of applicable frameworks. A more complete list of applicable frameworks may be found in Annex IV of the Fifth National Report to the Convention on Biological Diversity (MoEPP, 2014b).

### 2.1 2030 Agenda for Sustainable Development

---

At the UN summit in September 2015, world leaders adopted the [17 Sustainable Development Goals](#) (SDGs) of the [2030 Agenda for Sustainable Development](#). Goals 14 and 15 include a number of targets to safeguard life in oceans and on land respectively and are of specific importance for species conservation worldwide. Goal 15 states: "Sustainably manage forests, combat desertification, halt and reverse land degradation, *halt biodiversity loss*". One of the targets under this Goal is: "Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species". Hence, protecting threatened species and preventing their extinction is explicitly part of this goal. While the SDGs are not legally binding, governments are expected to take ownership and establish national frameworks for the achievement of the SDGs. The Red List can be used to verify whether threatened species have indeed been prevented from going further down the extinction road, or whether additional species have become threatened.

### 2.2 Convention on Biological Diversity

---

By far the most important and most powerful global agreement for the conservation of biodiversity is the [Convention on Biological Diversity](#) (CBD). In 1992 in Rio de Janeiro, the World Summit on Sustainable Development adopted the convention and it entered into force on 29 December 1993. It is a multilateral agreement signed by 193 countries, including Macedonia, that have agreed that biological diversity is of common interest to mankind. The convention provides the framework for biological diversity conservation at global level.

To guide the implementation of the convention, the [Strategic Plan for Biodiversity 2011-2020](#) sets out a number of specific targets to halt the loss of biodiversity and reduce the underlying pressures. The targets are known as the [Aichi Biodiversity Targets](#). Under Strategic Goal C: *To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity*, Aichi Target 12 states: "By 2020 the extinction of known threatened species has been

prevented and their conservation status, particularly of those most in decline, has been improved and sustained". The Red List is of direct relevance to this target and to Strategic Goal C in general. In addition, several targets under Strategic Goal B: *Reduce the direct pressures on biodiversity and promote sustainable use* refer to the conservation status of species, for which the Red List is again the main unit for planning and the main measure of success.

To translate this overarching international framework into local action, every signatory to the CBD is required to develop and adopt a [national biodiversity strategies and action plan](#) (NBSAP). The NBSAP is an integrative cross-sectorial instrument for biological diversity protection planning at national level, developed through involvement of all stakeholders, and contains the specific targets that each country aims to achieve in order to meet the global targets. To date, a total of 189 of 196 (96%) signatory countries have developed NBSAPs. In Macedonia, the first NBSAP was adopted in 2004, and included the development of Red Lists for planning purposes. The NBSAP was revised in 2014 (MoEPP, 2014a) to align with the Aichi Targets, but the revised draft version has not been officially adopted yet and remains.

According to Article 26 of the convention, signatories are requested to evaluate their progress against the Aichi targets in periodic reports to the CBD. The Republic of Macedonia prepared three national reports for the Convention on Biological Diversity in the period 2003-2014 (MoEPP, 2016). The last national report, entitled the "Fifth national report to the Convention on Biological Diversity of the Republic of Macedonia", was submitted in 2014 (MoEPP, 2014b). It reported three preliminary Red Lists with a total of 151 threatened species: for fungi (122 threatened species), orthopterans (13 threatened species) and daily butterflies (16 threatened species). The national report for the 6<sup>th</sup> reporting cycle will have to be submitted by December 2018. The current red-listing project will potentially provide some data for this, and is expected to significantly add to the Red List species status information for the 7<sup>th</sup> reporting cycle.

***The Global Strategy for Plant Protection*** – The [Global Strategy for Plant Conservation](#) (GSPC) is a policy document produced in the frames of the CBD. It was adopted as a CBD outcome in 2002, and was updated in 2010 to align with the CBD [Strategic Plan for Biodiversity 2011-2020](#). The GSPC consists of [five objectives and a total of 16 targets](#) that aim to safeguard the botanical diversity for the sake of ecosystem resilience and human welfare. At least three of the 16 targets depend directly on the evaluation of extinction risk or the effective conservation of plant species (Targets 2, 7 & 8). For this, the GSPC recommends to use the IUCN Red List approach. The Strategy is meant to be implemented in harmony with the Strategic Plan for Biodiversity 2011-2020 and with other programmes of work, instruments and protocols, and initiatives of the Convention. Measures to implement the Strategy will need to be put in place at international, regional, national and sub-national levels. This includes the development of national targets and their incorporation into relevant plans, programmes and initiatives, including national biodiversity strategies and actions (NBSAPs). In the current draft NBSAP (MoEPP, 2014a), plants are mentioned explicitly in actions under several National targets (e.g. 7, 8, 9, 11, 13). Red Lists are a necessity for setting conservation priorities and reporting successes for this Global Strategy in a very similar way as the Aichi Targets of the CBD.

## 2.3 Bern Convention

---

The Convention on the Conservation of European Wildlife and Natural Habitats ([Bern Convention](#)) is a binding international legal instrument in the field of nature conservation, covering most of the natural heritage of the European continent and extending to some States of Africa. It was drawn up by the [Council of Europe](#) (an intergovernmental organisation not to be confused with the [European Council](#) or the [EU Council](#), both official EU institutions). Fifty countries and the European Union have signed up to the Convention and committed to promoting national conservation policies, considering the impact of planning and development on the natural environment, promoting education and information on conservation, and coordinating research. The convention aims to conserve wild flora and fauna and their natural habitats, with special attention given to endangered and vulnerable species, specified in appendices. The Red List is an important source of information to track and report on the conservation status of those species listed in the appendices of this convention.

In 1989, the convention adopted a pan-European network of protected areas, the [Emerald Network](#), which serves as one of the main tools for protecting the habitats and species listed in the appendices to the convention. Of the total number of 187 endangered habitat types listed, 33 were identified in Macedonia, while out of 927 European species requiring specific habitat conservation measures, 167 are present in Macedonia including 7 invertebrates, 13 fish species, 3 amphibians, 7 reptiles, 115 birds, 17 mammals and 5 plant species. The national Emerald Network in Macedonia currently includes 35 areas, covering 29% of the country's territory.

## 2.4 EU Nature directives

---

The EU Nature directives include the [EU Birds directive](#) and the [EU Habitats directive](#), both of which promote the 'favourable conservation status' of sites that are selected based on threats to habitats or species occurring in these sites. The first does so specifically for birds, whereas the second concerns primarily threatened habitat types and all other species groups. Both directives have annexes that list habitats and species that should be protected. Similar to the Bern Convention, the species lists take into account the conservation status of species as evaluated for the global Red List and more recently also the European regional Red Lists. Hence, the Red List is also the primary tool to report on the successes and failures of conservation measures taken. In 1992, the Habitats directive led to the establishment of the [Natura2000 network](#), which is the EU contribution to the Emerald Network, and shares most of the species on its annexes with the appendices of the Bern Convention. The procedures, species lists and data formats of the Emerald Network and the Natura2000 network have been streamlined in recent years, such that site data forms to designate network sites essentially contain the same information. In Macedonia, the recent IPA Project "Strengthening the capacities for implementation of NATURA 2000" (2016-2017) provided the impetus for the Law on Nature Protection to provide a legal basis for the establishment of the Natura2000 network. National reference lists

for habitats, plants and animals and birds of EU importance that are present in Macedonia have been drafted (see Appendix C), taking into account the species lists in the directives' annexes. The first steps towards identifying potential Natura2000 sites have been taken, but will require additional scientific field research in the next 3-5 years. An EU-funded project "Strengthening the capacities for effective implementation of the *acquis* in the field of nature protection" has been initiated in 2017 to produce EU-compatible management plans for future Natura2000 sites, to gather field data, develop a national biodiversity monitoring programme, and further the development of secondary legislation to the Law on Nature Protection.

## 2.5 CITES

---

The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. All import, export, re-export and introduction from an array of species covered by the Convention has to be authorized through a licensing system. Each Party to the Convention must designate one or more Management Authorities in charge of administering that licensing system and one or more Scientific Authorities to advise them on the effects of trade on the status of the species.

The species covered by CITES are listed in [three Appendices](#), according to the degree of protection they need. In the CITES context, the degree of protection they need is based on their *extinction risk*, which for the majority of the species on the Appendices is based on Red List evaluations. Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances. Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival. Appendix III contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade.

## 2.6 Bonn Convention

---

As an environmental treaty under the aegis of the United Nations Environment Programme, the [Convention on the Conservation of Migratory Species of Wild Animals](#) (CMS), also known as the Bonn Convention, provides a global platform for the conservation and sustainable use of migratory animals and their habitats. CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.

Migratory species that are in danger of extinction are listed on Appendix I of the Convention. The CMS uses the term 'endangered' in general correspondence with the IUCN Red List Criteria (Version 3.1). CMS Parties strive towards strictly protecting these animals, conserving or restoring the places where they live and mitigating obstacles to migration. Migratory species that need international co-operation are listed in Appendix II of the Convention. The Convention encourages the Range States to conclude global or regional agreements. In this respect, CMS acts as a framework Convention. The agreements may range from legally binding treaties to less formal

instruments, such as Memoranda of Understanding. For example, the [Agreement on the Conservation of Populations of European Bats](#) (EUROBATS) was adopted in 1994 and acceded by Macedonia. The list of priority bat species for this agreement was partially based on the IUCN Red List information. Another example is the [Agreement on the Conservation of African-Eurasian Migratory Waterbirds](#) (AEWA), which was also signed by Macedonia.

## 2.7 Ramsar Convention

---

The [Convention on Wetlands](#), called the Ramsar Convention, is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975. Its mission is “the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world”. The convention urges its signatories to “seek to include in the Ramsar List wetlands that include threatened ecological communities or are critical to the survival of species identified as vulnerable, endangered or critically endangered under national endangered species legislation/programmes or within international frameworks such as the IUCN Red Lists or Appendix I of CITES and the Appendices of CMS”. Macedonia currently has 2 sites designated as Wetlands of International Importance (Ramsar Sites), with a surface area of 21,616 hectares. Prespa Lake was listed in 1995, while Dorjan Lake was listed in 2007. A National programme for wetlands conservation (which is an obligation of the Parties to the Ramsar Convention) has not been developed, and measures for their protection and sustainable use have not been included in the national spatial plans, except in certain protected areas management plans, e.g. for Nature Park Ezerani (MoEPP, 2014a).

## 2.8 World Heritage Convention

---

At the General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) meeting in Paris from 17 October to 21 November 1972, the [World Heritage Convention](#) was adopted, linking together in a single document the concepts of nature conservation and the preservation of cultural properties. Its main tool is the World Heritage List, which includes places of natural and cultural heritage that are considered of global significance.

States Parties to the convention are invited to submit nominations of properties of cultural and/or natural value considered to be of "Outstanding Universal Value" for inscription on the World Heritage List. Outstanding Universal Value means cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole.

While cultural heritage has numerous direct and indirect influence on natural heritage (and vice versa), of direct relevance for the current report is the natural heritage component. For the purposes of the World Heritage Convention, natural heritage is described as:

- natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
- geological and physiographical formation and precisely delineated areas which constitute the habitat of **threatened species** of animals and plants of outstanding universal value from the point of view of science or conservation;
- natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

Thus, the conservation status of species is considered a ground for listing sites on the World Heritage List. Specifically, one of the criteria for sites to be considered to have Outstanding Universal Value states: the site “contain[s] the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of Outstanding Universal Value from the point of view of science or conservation”. In nominating natural heritage sites, information on habitats, species and population size, and other significant ecological features and processes is required. Species lists should be provided where practicable, and the presence of threatened or endemic taxa should be highlighted. The extent and methods of exploitation of natural resources should be described. Hence, the data compiled for Red Lists and the World Heritage List show considerable overlap, and support each other.

## 2.9 Other international tools

---

A number of concepts to identify areas of special importance for conservation have been suggested and used globally. The arguably most widely used examples are Important Bird and Biodiversity Areas, and Important Plant Areas. [Important Bird and Biodiversity Areas](#) (IBAs) are places of international significance for the conservation of birds and other biodiversity. Since the late 1970s, the BirdLife Partnership has been working collectively to identify, document and protect all places on earth of greatest significance for the conservation of the world’s birds. As a result, over 12,000 Important Bird and Biodiversity Areas have been identified, of which 24 are located in Macedonia (Velevski et al., 2010).

[Important Plant Areas](#) (IPAs) are natural or semi-natural sites exhibiting exceptional botanical richness and/or supporting an outstanding assemblage of rare, threatened and/or endemic plant species and/or vegetation of high botanic value. The concept is supported by Plantlife International. Important Plant Area projects are being implemented in over 70 countries to achieve Target 5 of Global Strategy for plant conservation agreed under the Convention of Biological Diversity. Forty-two IPAs have been identified in Macedonia (Radford and Odé, 2009).

### 2.9.1 Key Biodiversity Areas

---

In contrast to the areas of importance for specific taxonomic groups mentioned above, [Key Biodiversity Areas](#) are nationally identified sites contributing significantly to the global persistence of all biodiversity in terrestrial, freshwater and marine ecosystems. Hence, KBAs are seen as an ‘umbrella’ designation, which includes globally important sites for different taxa and



realms, such as Important Bird and Biodiversity Areas, Important Plant Areas, Prime Butterfly Areas, and others. The identification of KBAs is an important approach to address biodiversity conservation at the site scale, i.e. at the level of individual protected areas, concessions and land management units. They are also of particular importance to the private sector, in providing 'watch lists' of sites at which development activities require a particularly high level of scrutiny to avoid negative impacts on biodiversity. Other uses of KBAs include informing safeguards and offsets design and conservation investments. KBAs have clearly defined boundaries and are identified using [globally standardised criteria and thresholds](#) as presented by IUCN (2016). There is no maximum or minimum size of sites, because appropriate size varies according to the socio-economic criteria, such as land use and tenure. The combination of Red Lists with Key Biodiversity Areas provides great potential for enhanced conservation planning (Azam et al., 2016). Melovski et al. (2012) identified 42 KBAs in Macedonia, based on IBAs and IPAs. However, the latest strategic documents for nature conservation (see section 3.2 on p17) do not mention KBAs as a priority, and instead focus on the revision of the already assigned IBAs and IPAs.

### 2.9.2 Alliance for Zero Extinction

---

Formed in 2000 and launched globally in 2005, the [Alliance for Zero Extinction](#) (AZE) engages 88 non-governmental biodiversity conservation organizations working to prevent species extinctions by identifying and safeguarding the places where Endangered or Critically Endangered species (according to the IUCN Red List) are restricted to single remaining sites. Thus, besides the endangerment criterion, the irreplaceability and discreteness of the location are two further criteria for the selection of AZE sites. To date, AZE has identified sites for those taxonomic groups that have been assessed for the global IUCN Red List: mammals, birds, some reptiles (crocodilians, iguanas, turtles, and tortoises), amphibians, conifers, and reef-building corals. Other taxa will be added as data become available. AZE sites overlap extensively with other conservation priority-setting tools such as the Key Biodiversity Areas and Important Bird and Biodiversity Areas mentioned above. For instance, 44% of all AZE sites are also IBAs.

The AZE sites provide a tool to defend sites against many of the most predictable species losses. Country-based initiatives (national Alliances for Zero Extinction) representing partnerships of government agencies and non-government organizations accelerate the protection of AZE sites in compliance with national commitments under the Convention on Biological Diversity. Although AZE is first focusing on species that face extinction either because their last remaining habitat is being degraded at a local level, or because their tiny global ranges make them especially vulnerable to external threats, outside the scope of the Alliance, many AZE members are also working to protect highly endangered species that are more wide-ranging and require different conservation measures.

## 3 RED LISTS AND NATIONAL SPECIES CONSERVATION

---

Similar to the international conventions, very substantial and well-elaborated overviews of national laws and institutional frameworks are given in the draft National Biodiversity Strategy and Action Plan (MoEPP, 2014a), the Fifth National Report to the Convention on Biological Diversity of the Republic of Macedonia (MoEPP, 2014b) and the draft National Strategy for Nature Conservation (MoEPP, 2016). Here, we will only briefly highlight the relevance of the Red List for some of these.

### 3.1 Laws and by-laws

---

The Law on Nature Protection (“Official Gazette of the Republic of Macedonia” no. 67/04, as amended) - regulates nature protection by protecting biological and landscape diversity, natural heritage, in and outside of protected areas, as well as protection of natural rarities. The Law stipulates measures for the protection of species and prescribes the development and adoption of a Red List of threatened species according to the IUCN Red List Categories, and a Red Book that includes the description, distribution, threats and other characteristics of the species on the Red List, as well as measures to improve their status/condition. The Red List should be updated every ten years or earlier, if necessary. In addition, the Law prescribes the development of lists of species that are nationally protected or strictly protected. Such lists have been developed (“Official Gazette of the Republic of Macedonia” no. 139/2011) based on species’ endemism, their conservation status as mentioned on the global IUCN Red List of Threatened Species™, their inclusion in appendices of several international conventions (Bern Convention, Bonn Convention, CITES) and annexes of the EU Nature Directives. For these lists to be effective, it is recognised that they need to be updated and adapted to the national context (e.g. including species that are not listed in the international documents but are threatened nationally). The draft NBSAP suggests using the Red List evaluations for this purpose. A set of protection measures and activities is in place for Strictly Protected species but still needs to be developed for Protected species (MoEPP, 2014a). Furthermore, a list of threatened and protected species of plants, animals and their parts was created (“Official Gazette of the Republic of Macedonia” no. 15/2012), controlling the collection and trade of protected plants, fungi and animals. A complete overview of adopted secondary legislation may be found in Annex III of the Fifth National Report to the Convention on Biological Diversity of the Republic of Macedonia (MoEPP, 2014b).

### 3.2 Plans and strategies

---

Several conservation plans and strategies have been developed in the last decades in Macedonia, and the establishment of Red Lists has always been one of the highest priorities. For example, the first National Biodiversity Strategy and Action Plan was adopted in 2004 and already included the establishment of Red Lists as a goal. Similarly, the National Environmental Action Plan II (MoEPP, 2006) listed the need for nature and biodiversity protection at the na-

tional and global levels, and included activities for the preparation of Red Lists. Below, the most recent strategic documents are highlighted, as they contain the most up-to-date and well-elaborated information on the environmental circumstances, legal and institutional frameworks, and strategic actions for species conservation in Macedonia.

Because around 44% of the proposed actions in the 2004 NBSAP were not implemented due to insufficient financial resources, lack of capacities, education and public awareness, and insufficient mainstreaming of biodiversity into different sectors, a revision of the NBSAP was needed. The process of revision was initiated in 2014, and the draft document includes several targets relating to biodiversity (MoEPP, 2014a). National target 12 explicitly refers to the development of Red Lists in order to inform progress on the conservation status of species.

In addition, the National Strategy for the Conservation of Nature (MoEPP, 2016) was drafted in 2016. The document is based on the report “Study of Geodiversity, Geoheritage and Other Components of Nature (Biological and Landscape Diversity)” and tackles nature conservation in its broadest sense, including national geoheritage as well as biodiversity. The Red List activities that were already mentioned in the NBSAPs and in the National Environmental Action Plan II were incorporated in National Goal 1 of the National Strategy for the Conservation of Nature, which specifies that Red Lists be developed and used as a basis for the revision of the Protected and Strictly Protected species lists (MoEPP, 2011).

### 3.3 The importance of Red Lists for institutions and stakeholders

---

Comprehensive overviews of relevant stakeholders in nature conservation in Macedonia are given in the drafts of the National Biodiversity Strategy and Action Plan (MoEPP, 2014a) and the National Strategy for the Protection of Nature (MoEPP, 2016). It is well-known that the conservation status of a species is an important factor in funding allocations for many potential funders. Hence, for all stakeholders, the Red List can be a helpful tool to guide fundraising efforts and project development.

For the national authorities, national Red Lists can help to draft and update national species conservation legislation, e.g. the lists of Protected and Strictly Protected species (MoEPP, 2011) as mentioned above. In addition, the monitoring of species distribution, population sizes, biodiversity resource extraction (fishing, collecting, hunting), trade, and export can be directed towards species that are assessed to be under threat.

The scientific community can use the Red List to guide research questions. For example, research can be directed to gather ecological information about threatened species and their habitat that will enhance the effects of applied conservation measures. In addition, research can be focused on filling data gaps for species that are classified as Data Deficient: geographic (areas where insufficient data for species groups is available), taxonomic (understudied taxonomic groups assumed to be under threat) or demographic (population size, fertility rates, survival rates, generation time) data gaps.

Civil Society Organizations, such as environmental NGOs can use the Red List to set their conservation priorities and focus project development on a single threatened species or areas

that host a high number of threatened species. Monitoring efforts for evaluating the success rate of implemented conservation actions could be geared towards providing the necessary information for updating the national conservation status of particular species. Organisations that have a strong outreach component can use the information and Red List status of particular species to highlight environmental problems and solutions.

Furthermore, in recent decades, businesses across the world have been increasingly taking corporate responsibility into account in their business planning, including their responsibility to evaluate and limit the impact of their business practices on the environment they share with society. Enterprises that plan to expand business activities and infrastructure can consult the national Red List and updated national lists of Protected and Strictly Protected species to identify areas of natural importance (e.g. hosting many threatened species).

**Note** – *“Businesses have changed when the public came to expect and require different behavior [...] I predict that in the future, just as in the past, changes in public attitudes will be essential for changes in businesses’ environmental practices.”, wrote the famous polymath Jared Diamond in his book ‘Collapse: how societies choose to fail or succeed’ (Diamond, 2005).*

## 4 STATUS OF BIODIVERSITY INFORMATION IN MACEDONIA

---

This chapter presents a summary of the data needs for national level red-listing and is followed by a preliminary assessment of the information that is available for evaluating the conservation status of the species in each of the major taxonomic groups. Specific attention will be given to those types of information that are needed for red-listing purposes: number of known species, endemism, taxonomic issues, population size, geographic range, threats, and on-going conservation actions. This summary of available data is preliminary in that it is most likely incomplete and in need of validation from the relevant institutions or experts once the red-listing process goes down to lower taxonomic ranks (e.g. families or species).

### 4.1 Data needs for red-listing

---

Red List assessments need to be extensively documented and require descriptive as well as quantitative information. The IUCN Criteria themselves (see Appendix A) are quantitative in nature, and each Criterion depends on one or more specific types of data. This section gives a general overview of the information that is needed in order to evaluate the conservation status of a species according to the IUCN Categories and Criteria. Because it will rarely be clear in advance which Criteria are appropriate for a particular taxon, each taxon should be evaluated against all the Criteria. Hence, the more information is available, the more Criteria can be used, and therefore the thoroughness of the assessment increased. For example, in Croatia, the Red Book of Amphibians and Reptiles (Jelić et al., 2016) explicitly states that some species and subspecies that were assessed using Criterion B would likely be assigned a higher category of threat if the necessary key information would have been available. Such instances can result in particular species or populations disappearing before the causes of decline are detected. Nonetheless, the absence of high-quality data should not deter attempts at applying the Criteria, as methods involving estimation, inference and projection are emphasised as being acceptable throughout the IUCN Red List guidelines. An extensive list of required and recommended data for each Criterion is given in the Documentation standards and consistency checks for IUCN Red List assessments and species accounts (IUCN, 2013).

*Note – Not all types of information listed necessarily need to be present for an IUCN Red List assessment to be conducted. A species only needs to meet the thresholds for one of the five Criteria in order to qualify for a threatened status. Indeed, some criteria will be inappropriate for certain taxa (some taxa will never qualify under these however close to extinction they come), and hence its data requirements will not apply to these taxa. The relevant factor is whether any one Criterion is met.*

**Taxonomy** – Higher taxonomy details (Kingdom, Phylum, Class, Order, Family) are required to identify which taxon is being assessed. This may seem obvious, but as the taxonomy of species is often revised to reflect newly gained knowledge, it is important to identify any taxonomic uncertainty than can lead to incorrect or duplicate assessments, and clarify where possible. Furthermore, the taxonomic data is used to update the taxonomic tree that forms the backbone

of the Red List assessment database (see section 5.3 on p39). Without an up-to-date taxonomic tree, the functionality of the Red List database and website is severely compromised.

**Endemism** – Information on endemism is needed for two reasons. First, for national endemics, the country bears the full conservation responsibility, including Red List assessment and consequent conservation measures. Second, a particular taxon’s endemism status can determine whether the standard guidelines for application of the Criteria should be used for regional or national assessments. If a taxon is endemic to the region or the regional population is isolated, the Red List Category defined by the Criteria should be adopted unaltered. If, on the other hand, conspecific populations outside the region are judged to affect the regional extinction risk, the regional Red List Category should be adjusted. Section 5.2.5 on p36 gives a more in-depth elaboration on the issue of endemism.

**Geographic range** – At the simplest level, a list of countries of occurrence is required to support Red List website functionality (especially country searches), and to allow basic analyses. A more detailed map of species distribution, preferably based on georeferenced data, is required to provide input for most of the Criteria. The distribution is used to calculate the extent and fragmentation of the species distribution, as well as the detection of trends over time.

**Population size** – Some Criteria require a population size estimate, which is defined as the number of mature individuals. A small population size can be a reason in itself for a species to be listed as threatened, but even for large population a decline in population size over time results in an increased extinction risk.

**Life history** –The relevant time frame over which the population or range declines are measured depends on the generation length of the species. Although several ways of estimating generation length exist, a taxon’s life-history information can provide the most direct way of estimating generation time, and thus help to estimate declines. Two Criteria use quantified declines based on generation time. [Tools](#) for calculating generation time are available.

**Habitat and ecology** – A summary of the taxon’s suitable habitats and ecological requirements is required supporting information for all taxa that are not evaluated as Least Concern. This summary should include information on the essential habitats and ecological conditions required by the taxon. An [IUCN habitat classification scheme](#) is available.

**Use and trade** – It is recommended that data on the type of use and the trade be recorded for those taxa that are utilized, including taxa that are legally or illegally hunted or collected. This information is useful background information that can guide the assessment.

**Threats** – For those species that are actually affected, the main causes of threats, the scale of the threats (affecting the entire global population or only specific parts of the taxon’s range), and the stress each threat places on the species need to be known and comprehensively summarised. [IUCN classification schemes for threats and stresses](#) are available.

**On-going conservation actions** – To provide the context in which to interpret a Red List assessment, information on conservation actions that are currently in place is needed. For example, a taxon may be evaluated as Vulnerable only because conservation action is preventing its extinction risk to increase. If the current conservation action would cease, the taxon’s threat

Category would likely change. For any taxa under threat, information about realistically achievable actions that are needed to mitigate the current causes of declines (if any) will be useful. Again, [IUCN classification schemes for on-going and planned conservation and research actions](#) are available.

## 4.2 Biodiversity information outlook

---

More than 22,500 species occur in Macedonia, and a reasonable amount of information on these has been gathered over the last decades. However, the data storage and management is much decentralised, and thus a major portion of existing information is hardly accessible and almost impossible to share and use (MoEPP, 2014a). In addition, information on species numbers and protection status as reported by different sources is often contradictory. These factors are predicted to hinder Red List assessments to some extent, at least for certain taxonomic groups.

In the following sections, a brief overview of the available information for Red List assessments is presented, with reference to the data needs presented in section 4.1 (p20). These overviews have been compiled through literature study and expert consultations and are aimed at giving a general overview to help the prioritisation of broad taxonomic groups for red-listing. A much more in-depth evaluation of available data will be necessary for the selection of target species within each of these broader taxonomic groups.

### 4.2.1 Algae

---

MoEPP (2014a) mentions that 2095 species of Algae are known to occur in Macedonia. Most of these are diatoms (Bacillariophyceae), which have been studied intensively in the last decades in the Ohrid and Prespa Lakes area in particular. Chlorophyta and Cyanophyta are the next best represented groups in Macedonia. The taxonomy of the algae is very diverse, but relatively well established, despite being shuffled by recent biomolecular and microspectroscopic advances (De Clerck et al., 2013). The rate of endemism in algae, including diatoms, is at least 10%, but it is expected that improving knowledge on the group would increase these rates considerably (MoEPP, 2016, 2014a).

Information on the occurrence of algae across the country is available, and some of it is maintained in digital format. However, it does not contain information on the size of populations across Macedonia. Due to the organismal diversity of the algae (from prokaryotic cell to meter-long photosynthesising aquatic organism), generalities about life history and habitat requirements (other than aquatic) are difficult to determine. Similarly, population sizes for some of the algal groups are difficult to define and sometimes meaningless. Some algae groups, e.g. diatoms and other micro-algae, are usually excluded altogether from assessment, because for the global IUCN Red List does not treat microorganisms. Nonetheless, Red Lists for Algae exist (e.g. Siemińska et al., 2006), and it is up to individual countries to decide whether or not these groups are considered in the national red-listing context. A useful alternative may be to evaluate

these groups on the ecosystem level instead of the species level. An IUCN Red List of Threatened Ecosystems is currently under development (Keith et al., 2015, 2013).

No currently on-going conservation actions for algae have been identified. Although the SSO (2015) mentions that 9% of all algae are protected, no algae occur on the lists of Protected and Strictly Protected Species (MoEPP, 2011).

#### 4.2.2 Fungi

---

Over 2000 taxa of fungi (primarily macromycetes) and 450 lichenoid fungi have been identified in Macedonia (MoEPP, 2016, 2014a), none of which are endemic. Around 20,000 specimens are held in the Macedonian Collection of Fungi (MCF), and are digitized in the MACFUNGI database, containing information on 36,000 collected specimens. Distribution data is available for 313 species of macromycetes belonging to 33 genera (MoEPP, 2014a), and more distribution maps have been published recently (Karadelev and Rusevska, 2016).

Threats to fungi in Macedonia are not well understood. On a global level, fungi are threatened by habitat loss, loss of symbiotic hosts, pollution, overexploitation, and climate change. In Macedonia, about 25% of fungi species are edible, but no records of collected quantities are available. As an indication, information contained in issued permits for export indicate that approximately 13,000 tons of fresh fungi were exported in 2012, approximately 2000 ton dried fungi and 1400 ton lichenoid fungi (MoEPP, 2014a). However, it is unknown to which extent this threatens their populations.

Four per cent of the known fungi in Macedonia appear on the national lists of protected or strictly protected species, while 3% of the lichenoid fungi are listed (SSO, 2015). Fungi do not occur on the appendices of either the Bern Convention or the EU Nature directives. A Red List of fungi of Macedonia was published, which lists 213 species of fungi according to the criteria of IUCN (Karadelev and Rusevska, 2012). Of these, 122 species were evaluated as threatened (21 CR; 30 EN; 71 VU). Note that this list is a Red List in the non-inclusive sense of the word (see section 1.1.1 on p4): detailed justification of each species' conservation status is not presented.

The mycological research community in Macedonia is active and is involved in the [global IUCN Red List initiative](#). In the frames of this initiative, the [Meeting of the European Mycological Association \(EMA\) and the International Society for Fungal Conservation \(ISFC\): 'Fungal Conservation in a Changing Europe: the Challenges Ahead'](#) was held in Ohrid in October 2017.

#### 4.2.3 Plants

---

MOSSES – Approximately 573 species of moss (Bryophytes) occur in Macedonia (Papp et al., 2016), however due to taxonomic uncertainty, the actual number remains uncertain (MoEPP, 2014a). None of the species known to occur in Macedonia is currently listed as endemic (SSO, 2015). Little is known about potential threats. One species of moss is present on the Bern Convention appendices and the EU Habitat Directive appendices (MoEPP, 2014a), and only eight species are listed as protected or strictly protected (MoEPP, 2011; SSO, 2015).



VASCULAR PLANTS – Approximately 3700 vascular plants are known to occur in Macedonia, of which 116 (3%) are endemic or near-endemic to Macedonia, with mountainous areas being centres of endemism (MoEPP, 2016, 2014a; SSO, 2015). In the frames of the current red-listing efforts, the near-endemism of certain taxa is recognised as potentially problematic. The taxonomy is largely clear, and active research is contributing new and rediscovered species (Teofilovski, 2017). The medicinal and aromatic plants (MAP) subset in Macedonia counts around 700 species, of which around 220 plant species commonly used (MoEPP, 2014a). The long-term project, Flora of the Republic of Macedonia, provides a description physical appearance and extensively treats the ecology and habitat requirements of most plants in Macedonia. This information is published in the “Flora of Macedonia” book series by K. Micevski, and its second volume (Matevski, 2014). In addition, a range of publications provide information on vegetation associations in Macedonia for different mountain and steppe regions in the country (MoEPP, 2014b). Hence, a large amount of occurrence records has been collected, but are not necessarily available in digital format. MAP species in Macedonia are not systematically monitored, while monitoring of forests focuses on diseases and pests and does not extend to other forms of biodiversity (MoEPP, 2014a). Monitoring of freshwater quality was performed by the National Hydrometeorological Service and PSI Hydrobiological Institute in 2011 using the composition and abundance of aquatic flora and benthic invertebrate fauna (MoEPP, 2014a). However, it is unclear where and how data of these efforts is being stored and managed. There is no comprehensive vegetation monitoring program for Macedonia.

Several plant species have become extirpated or are in immediate danger of becoming so due to habitat loss and fragmentation, while two species have been recorded to have become less threatened (MoEPP, 2014a, 2014b). Bad practices in forest management are an important threat, as well as water mismanagement due to hydro-electric developments (Radford and Odé, 2009). Pressures on wetland plant species are very high due to continued wetland conversion and pollution (MoEPP, 2014b). According to MoEPP (2017), data on water quality across the country is collated in a national water database, but is not publicly available. It has been raised that a number of MAPs and other non-timber forest products (NTFP) are under threat due to overharvesting, despite some being legally protected (MoEPP, 2014b). Collection and export permits are the only sources of information to quantify changes in population status for such species.

Of all flowering plant species in Macedonia, 11% (340 species) are listed as protected or strictly protected, but no official Red List of plants in Macedonia exists. However, recent efforts have seen 50 Macedonian monocot species being evaluated for the Balkan according to the IUCN Red List Criteria. Seven per cent of all vascular plants occurring in Macedonia (i.e. 273 species) are currently listed on the global IUCN Red List, none of which are threatened (IUCN, 2017c). Only 11 vascular plants species in Macedonia are present on the Bern Convention appendices, while 5 are present on the EU Habitat Directive appendices (MoEPP, 2014a).

Forty-two IPAs have been identified in Macedonia, and an overview list of species with information on their status on different convention appendices is available, however protection of these areas on national level is deemed insufficient (MoEPP, 2014a; Radford and Odé, 2009).

#### 4.2.4 Invertebrates

---

Excluding 113 species of Protozoans (MoEPP, 2010), approximately 13,493 species of invertebrates have been recorded for Macedonia, of which almost 90% are Arthropods, followed by Nematodes (4%), Molluscs (2%) and Rotifers (2%), as reported by Hristovski et al. (2015). Within Arthropods, Insects make up 85% of the diversity. Because endemism is such a complex concept in Macedonian invertebrate context, Hristovski et al. (2015) decided not to go into the analysis of endemism of this group. Nonetheless, information on endemism from other sources is presented in this paragraph, because indicative figures may be useful for the prioritisation of taxonomic groups for red-listing purposes. However, it needs to be stressed that the numbers of endemics cited in this paragraph should be treated with caution. Due to the sheer number of species of Arthropods, levels of endemism have only been established for a number of subgroups. Endemism as reported by MoEPP (2016) is highest in Sponges (60%), Annelids (30%), and Molluscs (29%). However, not surprisingly, certain lower taxonomic ranks (Subphyla, Classes, Orders and Families) show much higher degrees of endemism (MoEPP, 2010). 22% of Crustaceans are endemic, 18% of Myriapods and 8% of spiders, pseudo-scorpions and relatives (MoEPP, 2016). The Insects are so diverse that their research and management needs to focus on lower taxonomic ranks (Orders) to evaluate endemism and conservation status. The Ohrid and Prespa lake area is an important centre of invertebrate diversity and endemism (MoEPP, 2014a), and so too are the caves of western Macedonia. Especially the watershed of the river Radika, Galichica, Jakupica and Poreche are rich in cave-dwelling organisms (stygofauna and troglofauna), with an estimated rate of endemism of 90% (MoEPP, 2014a).

Quantitative population estimates are rare for most invertebrates, and although for some groups a reasonable amount of occurrence data is available, geographic distribution maps are coarse (e.g. [Fauna Europaea](#)). Monitoring of freshwater benthic invertebrates was conducted alongside the freshwater flora monitoring by the National Hydro-meteorological Service throughout 2011, but here too, the status of the gathered data is unclear (MoEPP, 2014a).

Threats to invertebrates are mostly habitat alteration. Given the diversity of the group, many different types of alterations can affect the group: changing water regimes (extraction, reservoirs, loss/increase of vegetative cover, climate change), water pollution from agriculture, industry or waste disposal sites, etc. (Lemonnier-Darcemont et al., 2014; MoEPP, 2014a); however, data on these threats and their quantitative effect on invertebrates are scarce.

The current conservation status of most invertebrates is relatively unknown, even for the better studied groups (e.g. Verovnik et al., 2010), but select groups have been evaluated according to IUCN criteria. Krpač & Darcemont (2012) have published a red list of daily butterflies from the Republic of Macedonia. A total of 69 species are included in this list, of which 1 is considered Endangered, 15 are classified as Vulnerable, 24 are Near Threatened, and the remaining

27 are not assigned a status according to the IUCN criteria, but are considered conservation important for endemism or a small area of dissemination. Lemonnier-Darcemont et al. (2014) developed a Red List of Macedonian Orthoptera (grasshoppers and crickets), evaluating the extinction risk of 175 species using IUCN criteria. The list includes 13 threatened taxa (1 CR; 4 EN; 8 VU). Note that, similar to the national Red List of Fungi mentioned before (Karadelev and Rusevska, 2012), both invertebrate lists are Red Lists in the non-inclusive sense of the word (see section 1.1.1 on p4): detailed justification of each species' conservation status is not available.

Under current national protection or strict protection are 60% of Sponges, 41% of Molluscs, 19% of Annelids, and 3% of Arthropods (MoEPP, 2011). Within the Arthropods, 29% of Crustaceans are listed, 16% of Myriapods, 4% of Spiders and relatives, and 2% of all known Insect species in Macedonia (MoEPP, 2011). Eight Prime Butterfly Areas have been suggested, some of which are partially protected on national level (MoEPP, 2014a).

#### 4.2.5 Fish

---

The total count of fish species in Macedonia is considered to be 85 Ray-finned fishes (Actinopterygii) and 2 species of Lampreys (Petromyzontiformes), of which 19 are not native to Macedonia (MoEPP, 2016, 2014a) and 27 are endemic (SSO, 2015). However, the taxonomy of this group is under debate (especially the trout family – Salmonidae), which has hampered the total count of species (estimates range from 66-87), the identification of endemics, targeted research and conservation measures (MoEPP, 2014a).

Data on fish population sizes and distribution ranges is scarce and information on trends is available only indirectly for some species through fisheries data. The SSO (2015) reports relatively stable fish harvests (approx. 1500 tons/year) between 2010 and 2014, but overfishing by unplanned commercial fishing as well as illegal fishing is impacting some species (MoEPP, 2014a). Fish are further threatened by changes in water regime due to drainage, reservoirs and dams, and by water pollution by agrochemicals, waste site leakage and sediment disturbance. In addition, the presence of introduced species affects the extinction risk of native species (MoEPP, 2014a).

Although the total count of fish species in Macedonia is only 87 (including Lampreys), the IUCN Red List contains 89 species Ray-finned fishes for Macedonia, of which 13 are globally threatened (IUCN, 2017c). This discrepancy may be a result of the taxonomic uncertainty in this group, or geographical inconsistencies in the IUCN Red List (MoEPP, 2014a). SSO (2015) mentions that 38 species are nationally protected, whereas (MoEPP, 2014a) report only 30 species and note that two species are on both the strictly protected list and the protected species lists. Upon examination of the official lists, we conclude there are a total of 34 species listed, of which 30 are considered endemic (MoEPP, 2011).

#### 4.2.6 Amphibians

---

Fourteen species of amphibians occur in Macedonia, none of which are endemic (MoEPP, 2016; Uhrin et al., 2016), although a number of subspecies are present only regionally (MoEPP,

2014a). The distribution of most species is relatively well-known, distribution maps exist, and information is frequently being added (Uhrin et al., 2016). Quantitative population studies were not found.

All amphibian species occurring in Macedonia are categorised as Least Concern on the global IUCN Red List (IUCN, 2017c) and a national Red List has not been developed. Eight species (57%) are listed on both the Bern Convention and the EU Habitat directive appendices (MoEPP, 2014a), as well as on the national list of protected species (MoEPP, 2011; SSO, 2015).

#### 4.2.7 Reptiles

---

Reptiles are represented in Macedonia with 32 species: four species of tortoise, 12 species of lizard and 16 species of snake (MoEPP, 2014a; Uhrin et al., 2016). No species are endemic to Macedonia, but two species are regional endemics (MoEPP, 2016; Sterijovski et al., 2014). Considerable information on the distribution of all reptile species is available in accessible format (Sterijovski et al., 2014; Uhrin et al., 2016), and some quantitative information on certain species is available from the island of Golem Grad (MoEPP, 2014b).

Habitat loss and degradation are the principal threats to reptiles, besides illegal collection and unsustainable trade, invasive species, pollution, disease and climate change.

Seventy-five per cent (24 species) of all reptile species occurring in Macedonia are listed on the IUCN Red List (IUCN, 2017c), of which 2 species are globally threatened (Orsini's viper *Vipera ursinii* and the spur-tighed tortoise *Testudo graeca* are both Vulnerable). 24 species are also listed on in the Bern Convention appendices and 25 species in the EU Habitat directive appendices (MoEPP, 2014a). The SSO (2015) mentions that 28 (88%) are listed as nationally protected or strictly protected, however MoEPP (2014a) mentions 1 species strictly protected and 22 protected, as listed in MoEPP (2011).

#### 4.2.8 Birds

---

Birds are globally one of the best studied groups. In Macedonia, 318 species are known to occur undoubtedly, while another 16 species are known from records that are considered less reliable (Velevski and Vasić, 2017), and none of them are endemic to the country (MoEPP, 2014a).

Quantitative assessments of the populations of certain priority species have been made, and trends in the populations of certain bird species (Griffon Vulture, Egyptian Vulture, Lesser Kestrel, Imperial Eagle) have been documented (MoEPP, 2014a, 2014b), but data on the numbers of common species and particularly species related to forest habitats is missing (Velevski et al., 2010). Continuous monitoring of vultures in Macedonia has been carried out by the Macedonian Ecological Society since 2003 in the frames of the Project for vultures protection in Macedonia, while winter census of waterfowls on the three natural lakes, as well as certain artificial lakes and fishponds is performed irregularly since 1987, with increased intensity for the last several years (MoEPP, 2014a). However for many species, including some priority species, no information on population trends is available.

Threats to birds include loss of habitat and nesting sites, reduced prey base, poisoning, and changing water regimes, but a systematic evaluation of different threats is not available. Of all bird species recorded in Macedonia, 94% (320 species) is included in the IUCN Red List, of which 14 species are threatened (IUCN, 2017c). The slender-billed curlew is Critically Endangered (but is not included in the reliably observed species for Macedonia), the Egyptian vulture and the Saker falcon are Endangered, while five ducks, two eagles and a dove are Vulnerable (IUCN, 2017c). According to SSO (2015), 106 species (33%) are listed as protected or strictly protected. MoEPP (2014a) notes that 65 bird species (19%) are listed on Annex I of the EU Birds directive, while 15 migratory species are listed on Appendix I of the Bonn Convention (Convention on Migratory Species). Twenty-four Important Bird and Biodiversity Areas have been identified in Macedonia.

#### 4.2.9 Mammals

---

According to MoEPP (2016), 90 species of mammals inhabit Macedonia. However, MoEPP (2014a) mentions a total of only 85. It is assumed that the number 90 includes subspecies. There are no species endemic to Macedonia, but four species are endemic to the Balkan region (MoEPP, 2016). The subspecies of chamois and lynx that occur in Macedonia are endemic to the Balkan region. Kryštufek et al. (2009) suggested that the suslik population known only from Mokra Planina be regarded as an independent unit of conservation due to its phylogenetic difference from other suslik populations. However, its status as a subspecies has thus far not been clarified (Janák et al., 2013), which may prevent this population from being considered as an endemic taxon.

Monitoring of the Balkan lynx has been performed continuously from 2006 (by camera trap method) in the frames of the Programme for Balkan Lynx Recovery by the Macedonian Ecological Society (MoEPP, 2014a), and quantitative population assessments exist (MoEPP, 2014b). Except for monitoring of game species based on data from hunters' associations and concessionaires of hunting sites, no further systematic monitoring of mammals is conducted, and few quantitative analyses have been done. A decline in the chamois population size has been observed in NP Mavrovo, mainly due to poaching (MoEPP, 2014b). For other mammal species, MoEPP (2016) notes that comments on the distribution and a review of endemism is available. Monitoring data originating from government efforts should be public (in accordance with Article 154 of the Law on Nature Protection), but it is not gathered in a single integrated database, making it effectively inaccessible (MoEPP, 2014b).

Threats to mammals are diverse, and include land abandonment and resulting loss of open, grazed area, reduced availability of prey, poisoning, and poaching. No national Red List of Mammals exists, but at the species level, 93% (79 species) of all mammal species occurring in Macedonia have a global assessment published on the IUCN Red List, of which 6 species are threatened: three bats, two rodents and a mustelid. All mentioned species are considered native. At the subspecies level, a global IUCN Red List assessment was published online for the Balkan lynx (*Lynx lynx balcanicus*) in 2015 (Melovski et al., 2015),

## 5 RED-LISTING IN MACEDONIA

---

Guidelines for national and regional red-listing are available (IUCN, 2012a), but additional information on the general process of creating a national Red List, such as dealing with taxonomy, databases, and peer review, are not readily available (Zamin et al., 2010). Some regional Red Lists initiatives have been guided by IUCN and have benefited from the experience with global and regional Red List experience. However, most national Red Lists are conducted independently by experts in the country, and do not necessarily follow the IUCN Red List standards. Within the current project, a rough approach for the general process of creating national Red Lists has been outlined. In this chapter, we outline the envisioned process for the Macedonian Red Lists, we give a short overview of national Red Lists from countries in the region, point out important steps for the project implementation, and highlight key points and topics on which decisions need to be taken.

### 5.1 Organising the red-listing process

---

Within the frames of the current project, IUCN ECARO is acting as a facilitator and advisor for conducting national Red List assessments in Macedonia, but it does not consider itself the appropriate agent to make final decisions on the national red-listing process and priorities. Because the process for developing national Red Lists differs from the global IUCN Red List at multiple stages of the red-listing process (pre-assessment, assessment, review and consistency checks, submission, publication), several decisions need to be taken to set the context within which the red-listing process will take place before the actual Red List assessments can be conducted. Decisions need to be made regarding the taxonomic groups that will be prioritised, taxa to exclude from the national Red List altogether, the composition of the assessor teams, the national data management structure and data model, etc. Hence, an important step in the early stages of the project is the identification or establishment of a group of experts that will act as a steering and decision-making body for national Red Lists within this project, and possibly beyond. This steering body is expected to be nested within the Scientific Advisory Board of the overall UN Environment project. The function of the steering body is very important, and a more detailed list of its responsibilities is presented in section 5.2 on p32.

Once the context for the Macedonian red-listing exercise is clearly defined by the Red List steering body, conditions are set to start the actual national Red List assessment process. The priority species for red-listing are selected in two steps. Firstly, a set of broader taxonomic groups are selected using a number of selection criteria agreed upon during a general consultation. Specifically, the priority list of taxonomic groups is determined by a selection process called the Weighted sum model, the most commonly used method for multi-criteria decision analysis (Triantaphyllou, 2000). In this prioritization process we first list all selection criteria for taxonomic groups, and assign a weight (relative to its perceived importance) to each of them. Then, we list all taxonomic groups that potentially qualify for red-listing, and give every one of them a score for each criterion according to the extent it meets the criterion. For each taxonomic group,

we then multiply its scores with the respective weight for each criterion and sum the weighted scores. Finally, we rank the taxonomic groups according to their weighted scores. This process yields a preliminary ranking of the taxonomic groups, which can be used by the national Red List steering body to decide which taxonomic groups will eventually be prioritised.

In the second step, for each selected taxonomic group, teams of Red List assessors are assigned by the national Red List steering body. These assessor teams consist of experts on the respective taxonomic groups and have the following tasks:

- Select priority species within taxonomic groups
- Compile the necessary information for the Red List assessments
- Conduct the Red List assessments for all selected species (including the production of distribution maps)

Selecting priority species can be based on expert knowledge and available documents from previous projects (see appendix B & C), and throughout the project, we will encourage the assessor teams to consult experts from neighbouring countries that have useful advice on the needed assessment data and the assessment process for particular taxonomic groups or species.

Once species are selected, the data gathering for their assessment focuses first on compiling data from databases, literature and other relevant sources of information (e.g. herbaria, natural history museums, personal collections, etc.). For each species, an overview of available and missing data is produced and if necessary field campaigns are planned and conducted to fill data gaps. As data becomes available, the assessments are conducted. Prior to performing their tasks, a subset of assessor team members is expected to attend a 4-day intensive Red List Assessor training by the IUCN Red List Unit. This training will provide the assessors with the necessary skills and knowledge to evaluate the quantity and quality of available data, the need for additional data collection and to effectively apply the IUCN Categories and Criteria to evaluate extinction risk for regional Red Lists.

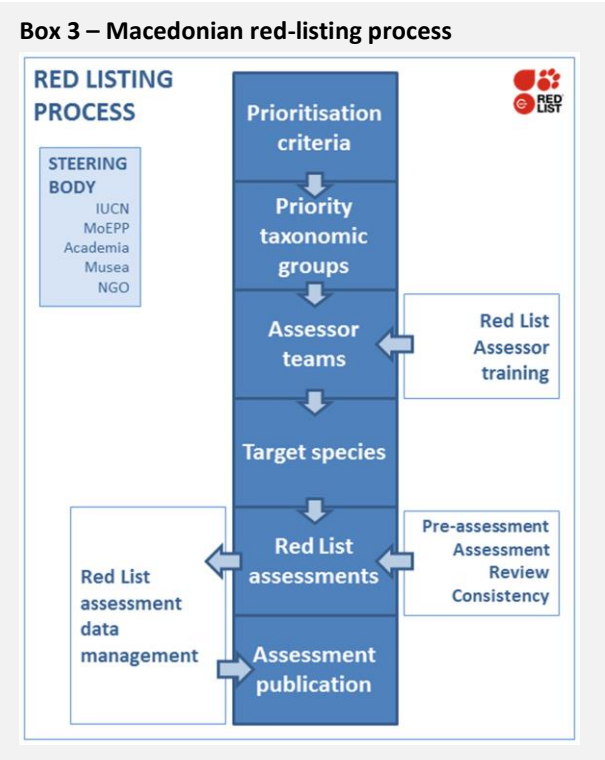
When an assessment is concluded, it is reviewed by at least one independent expert. A couple of review methods may be considered. Independent experts may be identified by contacting the relevant IUCN Red List Authority for the species. Typically, the Species Specialist Groups of the IUCN Species Survival Commission are the recognized Red List Authorities for the species in their remit (for example, the Cat Specialist Group is the Red List Authority for all species in the family Felidae). IUCN ECARO can assist the national Red List steering body and assessor teams to identify and arrange appropriate experts. The involvement of Red List Authorities may or may not involve additional costs. Alternatively, a review workshop is conducted where local experts from related taxonomic groups evaluate each other's assessments on the use of the IUCN Criteria and the quality of the required supporting information. The chosen review methods are not

*Note – The IUCN Species Survival Commission (SSC) is a science-based network of more than 10,000 volunteer experts working together in more than 140 [Specialist Groups, Red List Authorities and Task Forces](#). Some groups address conservation issues related to particular groups of plants, fungi or animals while others focus on broader issues such as reintroduction of species into former habitats, climate change, wildlife health and sustainable use and trade.*

mutually exclusive and may differ between taxonomic groups and even taxa, as the availability of local experts will determine whether an in-house independent review is a possibility.

As national Red List assessments are conducted, the conservation status and all supporting documentation need to be entered and stored efficiently in a data management structure. Proper data management is of crucial importance to make the benefits of Red Lists available for policy-making and the general public. Ideally, the data management structure would allow multiple experts working remotely and simultaneously on the same assessments, and would allow for easy extraction and analysis of conservation status information to inform policy. The current project foresees the development of a data management structure to provide these services (see section 5.3 on p39). Before the assessments can be published, a number of consistency checks are prescribed to ensure that all of the required supporting information is attached and in the appropriate format, the IUCN Red List Criteria have been applied appropriately and consistently, distribution maps have been prepared for all assessed taxa and the mapping standards have been followed for these. These consistency checks should be carried out by the appropriate assessors and current project staff.

Finally, an efficient data management system should enable fast and effective, widespread dissemination of conservation status information through a suitable means of publication. The current project includes the digital publication of species fact sheets presenting the main information in the Red List assessments. These fact sheets could be produced as stand-alone digital files, or may be presented through an online national Red List website that is linked to the national data management structure. The activity of the overall UN/GEF project for which this report has been written does not foresee funds for a printed book version of the Red List assessments. However, another activity within the overall project does provide this option and should be discussed with UN Environment.



### 5.1.1 Endemic taxa

As mentioned in section 1.2 (p5), taxa whose global distribution falls within the territory of Macedonia are special cases because their national Red List assessment is at the same time their global Red List assessment. Therefore, these taxa will need to follow the exact procedures for the global Red List assessments, which may differ substantially from the procedure for non-endemics that was decided upon by the steering body. For example, the assessment will not need to take into account the Guidelines for application of IUCN Red List Criteria at regional and national levels; IUCN, 2012a), the review will have to be done by an external reviewer appointed



by the IUCN Red List Unit in Cambridge, the assessment will have to go through the Red List Unit consistency checks and it will need to be submitted to the Red List Unit for publication on the global IUCN Red List website. If the steering body decides to keep the national red-listing procedure closely aligned with the global procedure, complications arising from a taxon's endemism status can be minimised. The topic of endemism is more extensively treated in section 5.2.5 on p36.

## 5.2 Considerations for red-listing

---

As mentioned in section 5.1 above, the Red List steering body plays an important role in setting the scene for red-listing in Macedonia. However the need for an in-depth understanding of both global and regional red-listing methodologies, as well as of data management structures and the taxonomy, distribution and ecology of Macedonian species, makes the task of the steering body a challenging one. Its roles include (but are not limited to):

- Approving the selection method for taxonomic groups and select taxonomic groups
- Deciding on preferred Red List data management structure, and oversee its development
- Deciding on the data model: which data fields to include, which classification schemes to use, the necessity of distribution maps, etc.
- Deciding on the population threshold for including species in the national Red List
- Deciding on the population threshold for determining the responsibility of national near-endemics
- Nominating assessor team members
- Deciding on review methods and assisting with organising reviews
- Deciding on submission criteria (if deviating from the IUCN guidelines) and publication type
- Providing recommendations to policy-makers for species conservation policy and action.

It is clear that many of these roles involve decisions that require careful, well-informed consideration by the steering body. At the same time, some of these decisions may be delegated to the assessor teams when different taxonomic groups require different approaches. Hence, the Red List assessors too will need to understand the decisions and the context in which they will perform the species assessments. The following sections aim to provide first an overview how neighbouring economies from the region have dealt with these decisions (if at all), and subsequently provide a number of considerations that can assist the steering body in making decisions and help assessors understand the context.

### 5.2.1 Red Lists from the region

---

NATIONAL RED LISTS – In the South East Europe region, several national Red Lists have been produced over the last decade, and before enrolling on the Macedonian Red List quest, it may be useful to evaluate the approaches and processes used throughout the region. An overview of

past and present National Red Lists from within the South East Europe region is presented in Appendix D, and summarises which information on the underlying red-listing processes is described in the lists. For example, the (currently out-dated) Bulgarian Red List of Vascular Plants (Anchev et al., 2009) selected about 900 species (ca. 23 % of the total Bulgarian flora) considering the following criteria: presence in the Red Data Book of the People's Republic of Bulgaria, endemics, rarity in the country, occurrence in rare and vulnerable habitats, listing in the 1997 IUCN Red List of Threatened Plants, Habitats Directive and biodiversity conventions, etc. Data was gathered from experts using an IUCN questionnaire (the Red List Assessment Questionnaire and Authority – currently deprecated), and a taxonomic backbone was forged using two cited taxonomic sources. It gives a good description of how taxa were assigned to the Data Deficient or Not Evaluated Categories. In 2015, the Red List was updated and presented in [Volume 1 of the Red Data Book of the Republic of Bulgaria](#), which is available online. In Croatia, it was the preparations for joining the European Union, especially drawing up the proposed ecological network of nature conservation areas NATURA 2000, that spurred intensified research of biodiversity. The acquired knowledge served as the foundation and impetus for a series of Red Books (e.g. Antolović et al., 2006; Belančić et al., 2008; Jelić et al., 2016; Ozimec et al., 2009; Radović et al., 2003). The Red Book of Amphibians and Reptiles (Jelić et al., 2016) relied on a centralised database of over 20,000 occurrences collected from literature, reports, museum collections and personal data. As part of its data model, it used a National Habitat Classification scheme to describe habitats for the Red List assessments and used the IUCN threat classification scheme to describe threats. Red Lists in the Federation of Bosnia and Herzegovina describe the set of criteria used to select taxa, and Red List efforts in Kosovo and Serbia have used custom software tools to conduct and store the assessments. The overview in Appendix D lists further examples in these and other countries such as Albania and Greece.

From the overview, we can gain some insight in observable trends. Most importantly, we notice that, while most national Red Lists in the region use the IUCN Categories and Criteria, as well as some version of the Guidelines for Application of IUCN Red List Criteria at Regional and National Levels (IUCN, 2012a), few provide any additional information on the decisions made during the process, for example the treatment of endemics, assigning the DD, NA and NE Categories, data storage methods, data models, review process etc., making it difficult to get an understanding on how neighbouring countries organised their red-listing process. However, we do note an increased use of standardised classification schemes over time (e.g. for habitat, threats, conservation measures), the experimentation with different software and forms for data collection and management, and the increasing use of maps as an integral part of the species assessments. National Red Lists have mostly been published as scientific articles or in a printed book format, but the more recent Red Lists that are printed in book format are usually made available online in their entirety in pdf or html format as well. Although such online versions significantly increase the Red Lists' potential outreach value, it does not allow for updating status assessment as frequently as a national Red List website would do. With the exception of the latest Bulgarian Red Data Books, none of the national Red Lists in the overview provide an interactive and

searchable website that allows for widespread public access, comparable to the global IUCN Red List website.

REGIONAL RED LISTS – In the last decade, a series of regional Red Lists were produced for various taxonomic groups (e.g. García Criado et al., 2017; Nieto et al., 2015 – see the [‘Initiatives’ section](#) of the IUCN Red List webpage for a full list). Most lists cover the regions of either Europe (both the continent scale and within the political boundaries of the EU) or the Mediterranean, and usually consist of two components. One is a summarising document (printed and/or digital) providing background information clearly detailing who led, conducted and contributed to the Red List assessments, how species were selected, decisions made regarding the taxonomic and geographic scope, endemism, the data model used, data management systems used and other relevant information regarding the assessment and review process. A second component consists of the actual species assessments and all their required documentation, which are published under a regional tag on the global IUCN website. This dual publication approach meets the increased need for short communications in flexible digital formats and maximises the reach to both the wider public and the more specialised scientific and conservation community. Since the regional red-listing processes are generally led by IUCN, the regional Red Lists and the description of the process are usually more comprehensive and cover more detailed ins-and-outs of the red-listing process than the national initiatives discussed above.

On many of the mentioned aspects, the current (and future) Macedonian Red List project(s) will need to decide how to proceed. Unlike most other countries, Macedonia has the advantage that its national Red List process is kicked off and led by IUCN. Despite national Red List processes usually being more constrained by national legal and institutional frameworks than regional Red Lists, IUCN’s role in the current project still offers an opportunity to benefit from its guidance in a similar, albeit slightly more constrained, way than the regional Red Lists.

## 5.2.2 Red List methodology

---

For evaluating the extinction risk of species on the national level, using the IUCN Categories and Criteria is recommended and in many cases it is also the easiest option. It removes the burden for a nation of devising an extinction risk classification system from scratch, and provides compatibility with other Red List assessments of neighbouring countries and larger scale assessment (regional or global). However, it is not a strict prerequisite for national Red Lists to adopt the IUCN methodology (see section 1.2 on p5). The IUCN Criteria have been criticised for not being suitable for certain taxonomic groups (e.g. invertebrates - Cardoso et al., 2011), and some countries prefer to use their own system. Nonetheless, in their evaluation of national Red Lists in Europe and the Mediterranean, Azam et al. (2016) found that in about half of the countries, lists were elaborated following the current IUCN Categories and Criteria Version 3.1 (IUCN, 2012b). Some countries used a methodology adapted from the IUCN Categories and Criteria, and only a few used their own methodology (e.g. Germany) or a superseded IUCN methodology. All national Red Lists that have been produced thus far in Macedonia have used the IUCN Categories and Criteria, and the same is true for most Red Lists in many neighbouring countries

(Anchev et al., 2009; Jelić et al., 2016; Lelo et al., 2016; Michev et al., 2011; Natcheva et al., 2006; Sabovljevic et al., 2004; Stojanović et al., 2013; Temniskova et al., 2008). We suggest using the globally available IUCN Red List resources to conduct further national Red List assessments in Macedonia, while taking into account any relevant guidelines for specific taxonomic groups are available, such as invertebrates (Cardoso et al., 2011), bryophytes (Hallingbäck et al., 1998), and fungi (Dahlberg and Mueller, 2011).

### 5.2.3 Taxonomic rank

---

The global IUCN guidelines suggest that Red List assessments may be applied at the species, subspecies and variety level. However, before an assessment of a subspecies or variety can be included, an assessment on the species level needs to be present. At the national scale, however, a globally distributed species may be represented only by one or more subspecies in the country, and it may be decided that the subspecies can be assessed even if a global assessment for the species (or subspecies) is not yet present. Nonetheless, in the case of national endemics (to which the global assessment procedures are applied), the current project can in principle only include species-level assessments, unless an assessment of both the species and subspecies can be performed during this project. Lower taxonomic ranks (e.g. forma, morph and cultivar) are usually not included on the IUCN Red List (IUCN, 2017b).

### 5.2.4 Taxon representation

---

The selection of taxonomic groups for regional and national Red Lists is usually a rather arbitrary and opportunistic process. Azam et al. (2016) evaluated the current status of national Red Lists in Europe and noted that the selection of taxonomic groups is most often guided by the available data and expertise, as well as predefined national conservation priorities. The authors discern three groups within the European and Mediterranean countries: (1) countries that evaluate a broad range of taxonomic groups; (2) countries that focus on well-known groups (e.g. most vertebrate groups); and (3) countries motivated by an interest in less well-known groups (e.g. fungi, plants and invertebrates). Fungi, plants and invertebrates are taxa that are usually underrepresented in conservation science and policy because they are speciose, inconspicuous, and often data poor (Collen et al., 2008; Zamin et al., 2010). Nonetheless, Zamin et al. (2010) found that plants actually have been well accounted for in national Red Lists across the world, while many countries have also succeeded in assessing samples of comparatively data-rich invertebrate groups, such as butterflies and damselflies, dragonflies, grasshoppers, and molluscs. These efforts provide evidence that national Red Lists can be major contributors to the global red-listing process (Zamin et al., 2010).

*Note – The IUCN global Red List has recognised the gap in taxonomic groups represented on the list and has set itself the goal of increasing the number of poorly represented taxonomic groups. The IUCN Red List goal is to assess a total of 160,000 species which represent a broader taxonomic base, to obtain a representative ‘Barometer of Life’. For comparison, the current number of assessed species on the global IUCN Red List is just over 87,500 (IUCN, 2017c). As such, the global IUCN Red List encourages national level initiatives to contribute the assessments of national endemics to the global Red List.*

The Republic of Macedonia would ideally evaluate a broad range of taxonomic groups. However, limitations in time and funds pose inevitable restrictions on the number of taxonomic groups and species that can realistically be assessed within the current project. To avoid arbitrary bias towards certain taxonomic groups during the on-going Macedonian red-listing process, the current project follows a more systematic selection approach (see section 5.1 on p29). To our knowledge, this project is the first regional Red List project to follow such an approach, and hence its usefulness will become validated throughout the project.

### 5.2.5 Endemism

---

Of note is the difficult concept of endemism in Macedonia. Endemism is a biogeographic concept: a species is endemic to a particular site or region (e.g. lake, mountain range, continent) if its global population occurs entirely within that site or region. Hence, endemism is always relative to the specified area. A site or region can be defined by physical boundaries (e.g. the edge of the lake), or by other, more arbitrary boundaries, such as political borders. For example, a species is endemic to the Republic of Macedonia if its entire global population is located within the country's borders. However, political boundaries rarely line up with physical boundaries, causing discrepancies that complicate the exact specification of endemism. Commonly used terms to indicate endemism are:

- **Local endemic** (or steno-endemic): a species only occurring in a single geographic location defined by natural boundaries (e.g. lake, mountain, valley, river), which may or may not cross political borders.
- **National endemic**: a species whose entire global population is contained within a region that is defined by national borders.
- **Near-endemic** (or sub-endemic): a species whose global population occurs almost entirely within the specified region, but has a small part of its distribution in bordering areas outside the region.
- **Regional endemic**: a species that occurs throughout a region that crosses national borders. In many Macedonian texts, the western Balkan region is the region of interest, but the larger South East Europe region or the entire European continent have been considered as well.

As is evident from the above descriptions, there is considerable overlap between these concepts of endemism. For example, a local endemic can at the same time also be a national endemic OR a near-endemic OR a regional endemic, while a taxon that is near-endemic to a particular country is by definition a regional endemic. This flexibility in terminology is needed because the concept of endemism is relative to the specified region and needs to accommodate changing boundaries. However, in many reports and reviews in the Macedonian context, it is unclear which definition of endemism has been used for which species group, and the determination of numbers of species strictly endemic to Macedonia becomes difficult to estimate.

Nevertheless, a clear definition and consistent use of the term 'national endemic' is of special importance for the red-listing process for two reasons. Firstly, if a taxon is endemic to the

country of Macedonia, the global responsibility for evaluating its conservation status and preventing its extinction lies entirely with the national institutions and organisations. Secondly, the national Red List assessment for national endemics essentially constitutes its global assessment and thus needs to follow the global IUCN Red List procedure in order to be published on the global IUCN Red List. Hence, for the purposes of the red-listing effort, it needs to be decided for each and every taxon whether or not it is a national endemic. For most taxa, a clear-cut answer will exist because their distribution either falls completely within the country's borders or it doesn't. However, for a number of near-endemics, the portion of a taxon's distribution that falls outside the country may be so small that it may be worth considering it a national endemic rather than a regional endemic (as would be the case in its strict interpretation). In this case, assessors will need to decide exactly when the taxon should be considered a national or regional endemic. If the taxon is regarded as a national endemic (and thus included as such in the national Red List assessments), the assessment will need to take into consideration (i.e. need to have access to data on) the part of the population that is located outside the country and will need to be conducted according to the global IUCN Red List procedure (without applying the Guidelines for application of IUCN Red List Criteria at regional and national levels; IUCN, 2012a). If the taxon is regarded as a regional endemic, only the part of the population residing inside the country is evaluated during the national Red List assessments and the Guidelines for application of IUCN Red List Criteria at regional and national levels are applied. In order to determine whether near-endemic taxa are regarded as a national or regional endemic, a useful approach could be to set a threshold value. Just as an example, it may be decided that a taxon that has more than 95% of its global population inside the country, is regarded as a national endemic. Provided data from the neighbouring 5% of the population is available, the taxon can be included as such in the national Red List assessments.

### 5.2.6 Native and non-native species

---

Within any region there will be taxa with different distribution histories, ranging from those that are indigenous (native to the area), and have been there since pre-human settlement, to those introduced more recently. Some regional Red Lists include a cut-off date to decide whether a taxon is considered native. For example, most of the European Red Lists consider species that were introduced after 1500 CE as non-native species. Such a cut-off date may be necessary for the assessment of some taxonomic groups in Macedonia as well.

### 5.2.7 Assigning 'Regionally Extinct' (RE) and 'Not Applicable' (NA)

---

Taxa extinct within the region but extant in other parts of the world should be classified as Regionally Extinct (RE). A taxon is RE when there is no reasonable doubt that the last individual potentially capable of reproduction within the region has died or disappeared from the region or, in the case of a former visiting taxon, individuals no longer visit the region. Because it is not possible to set any general rules for a time period since the last observation before taxa are classified as RE, the national Red List steering body will need to decide on adopting a relevant

time frame for RE assessments, which may or may not differ between the selected taxonomic groups or taxa. These should be clearly specified in all assessments.

The category of Not Applicable (NA) is used for a taxon that is deemed to be ineligible for assessment at the national level. A taxon may be NA because, although it is very widespread, it occurs at very low numbers in the country. For such cases, a threshold should be set to indicate which proportion of the global population needs to be present within the country in order to consider the taxon for the national assessment procedure. For instance, it could be decided that taxa having less than 1% of their global population occurring currently or within the last century within the country will not be assessed. It should be kept in mind that if this threshold is set too low, many marginal taxa will be considered highly threatened due to their small population sizes. In contrast to other Red List Categories, it is not mandatory to use NA for all taxa to which it applies, but it is recommended for taxa where its use would be informative. Guidance regarding the assignment of NA category is given schematically in Annex 3 of the IUCN Guidelines for application of IUCN Red List Criteria at regional and national levels (IUCN, 2012a).

### 5.2.8 Spatial analysis and mapping requirements

---

All Red List assessments that use Criteria A, B or D require the calculation of two spatial parameters: the Extent of Occurrence (EOO) and the Area of Occupancy (AOO) of the species. These parameters quantify the taxon's geographic distribution in different ways. The EOO outlines the geographic spread of all populations of a taxon, indicating the vulnerability of the global population to local disturbances. The AOO only comprises those areas within the EOO that are actually occupied by the taxon or are predicted to be so based on habitat characteristics. The Guidelines for using the IUCN Red List Categories and Criteria (IUCN, 2017b) provide more elaborate definitions of these two spatial parameters.

In addition, species distribution maps are required supporting information for all global IUCN Red List assessments and thus form an integral part of the documentation. A distribution map provides the current known distribution of the taxon (using occurrence points or areas) within its native range, and serves multiple important purposes. For example, it can provide the basis for calculating EOO and AOO, and as a visual display, it is one of the most important elements to enhance the interpretation of the conservation status for the general public by allowing people to easily see where a species is found. Additionally, by combining distribution maps from many taxa and analysing these alongside other Red List Data (e.g. Red List Category), simple but informative maps can be prepared to, for example, highlight areas with high numbers of threatened species, which can inform conservation planning and policy.

The calculations and mapping are usually performed in Geographic Information System software (see section 5.3.3 on p42), and the global IUCN Red List encourages the use of GIS shapefiles (for geo-referenced polygons or point localities) as the preferred format for spatial data. These shapefiles need to contain standard information such as presence of the species, origin of the species (is it native, non-native or naturalised in the area) and seasonality data. Codes and standards for this have been developed (IUCN, 2013).

### 5.3 Managing information flows

---

Conducting Red List assessments requires raw biodiversity data (e.g. presence locations, abundances, phenological information) from many different sources to be collated, such that it can be summarised in meaningful ways within the geographic scope of the assessment. This summarised data (e.g. population size, geographic range, threats, etc.) is used to conduct and document the Red List assessments. Hence, for producing a Red List assessment on the national level, all information about the species throughout the country needs to be collated and summarised. Unfortunately, raw biodiversity data is usually gathered in separate research projects or monitoring activities conducted by academic institutions, governmental agencies or NGOs. It is collected using a vast array of different field methods and is stored in decentralized data formats that fulfil the needs of the particular research project or monitoring program. Some data is published scattered in books, scientific literature or digital data management structures. The presence of a central biodiversity information system can greatly facilitate the analysis and summary of raw biodiversity information for the purpose of Red List assessments. Such a central biodiversity information system (usually consisting of multiple databases) collates and stores the raw biodiversity information from all different sources, and facilitates data analysis across thematic areas and at multiple scales to provide the summarised data needed for Red List assessments and other purposes (see section 5.3.1 below).

Following the Red List assessments, the assigned Categories and Criteria from all assessments, as well as their complete documentation are ideally stored in a database (see section 5.3.2 on p41) that is publicly accessible and can be updated as the need arises, such that policy-makers and the general public always have the possibility to check the most recent conservation status of any species. An overview of the entire process is presented in Figure 5 on p43.

#### 5.3.1 Collating raw biodiversity data

---

Even though biodiversity information is collected at different times and places for a variety of purposes, most biodiversity datasets are earmarked by means of the organisms' scientific names. These names are used to unequivocally attribute information on biology, ecology and distribution to the species. For this purpose, the use of an authoritative index of species names and taxonomic tree, is essential. A clear taxonomic backbone is a prerequisite for efficiently and reliably compiling biodiversity data in databases. Global taxonomic indices such as the [Catalogue of Life](#), as well as taxonomic databases at smaller geographic and/or taxonomic scale (e.g. [Fauna Europaea](#)), are used as the taxonomic backbone for a range of global information services, including the [Encyclopaedia of Life](#) and the IUCN Red List of Threatened Species. Within Macedonia, the Catalogue of Species (MoEPP, 2010) may serve as a starting point to produce the taxonomic backbone for the country. It is important to point out that the choice of the taxonomic backbone depends in part on the envisioned national data management structure for Red List assessments (see section 5.3.2 on p41). In case Macedonia relies on the global IUCN Red List



data management structure, the national Red List assessments will need to comply with the taxonomic backbone used for the global IUCN Red List.

In order to make biodiversity data fully compatible across database systems in different sectors, countries and continents, they need to have more in common than just the species names and taxonomy. The types of information (e.g. specimen-level, species-level or ecosystem level) and the data format need to correspond. Therefore, a number of international standards have been developed by [Biodiversity Information Standards](#), also known as the Taxonomic Databases Working Group (TDWG), of which the most commonly used ones are the DarwinCore (DwC) and The Access to Biological Collections Data (ABCD) schema. Technical specifications and an updated documentation of all TDWG standards are available at <http://www.tdwg.org/standards/>. These standards are extremely important for streamlining data exchanges and for facilitating large scale biodiversity analysis.

On the global scale, digital infrastructures for collating biodiversity data have been in existence for many years and are becoming more and more available to the general public. Examples include the [Global Biodiversity Information Facility](#), the [Biodiversity Information System for Europe](#) (BISE) and the [Ocean Biogeographic Information System](#) (OBIS). By providing an easily accessible starting point for data analysis and summaries, these data platforms have been invaluable for worldwide research across all spatial scales and across many taxonomic groups.

On the regional scale, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), through their Open Regional Fund for South-East Europe – Biodiversity (ORF-BD), have produced the “Regional Guidelines for Biodiversity Information Management and Reporting for South-East Europe”. These guidelines aim to review common technical and biodiversity standards for data exchange, and species and habitats lists, in order to ensure compatibility of biodiversity data among all relevant stakeholders in the region. It is a valuable document for development of internationally compatible national biodiversity databases.

In Macedonia, a significant effort was made to establish a system to collate biodiversity data from many different sources in the country. The National Information System for Biological Diversity (NISBD) with web application is hosted by the Ministry of Environment and Physical Planning and was established in 2011 as a part of a collection of National Environmental Information Systems (NEIS – including also environmental information systems for air quality and waste management). It contains a large amount of data (including spatial data) on species and natural habitats, threats as well as protected areas, and includes spatial querying functionality (MoEPP, 2017, 2016). Unfortunately, it is currently considered dysfunctional due to hardware failure (MoEPP, 2014a), and therefore it cannot fulfil its function as a convenient starting point for summarising data for the purpose of red-listing in Macedonia.

Even though the presence of a centralised database system that collates biodiversity data significantly reduces the work for Red List assessments, its absence does not necessarily affect the theoretical possibility to conduct Red List assessments. Available data can be collated and summarised species per species, and eventually used to assess extinction risk of the species

using the IUCN Categories and Criteria. However, assessments will require more time and human resources, which in turn increase financial demands.

### 5.3.2 Red List assessment data management

Each Red List assessment produces a volume of summarised species-specific data that is used to document the assessment. This summarised information in turn needs to be entered in a standardised format and stored in a suitable system. At the global level, the IUCN Red List Unit employs the Species Information Service (SIS) to store and manage all assessments for publication on the IUCN Red List website. The IUCN SIS is a password-protected, online database that was developed to facilitate and structure Red List assessment data entry, management and analysis. The application provides a standardized format for conducting and entering assessments, thereby ensuring assessments use the same classification systems (for threats, habitats, etc.) as well as ensuring taxonomic integrity. The system captures comments, references, detailed data, and edit history to ensure transparency of assessments and facilitate evaluation. Furthermore, it provides a Red List Category and Criteria “calculator”, which determines the Red List Category and Criteria that are met, using the species information entered. This ensures consistent application of the Categories and Criteria and facilitates the evaluation process. As an online web application, it allows experts to collaborate remotely on assessments and provides safe, secure storage of assessment information. SIS can also be downloaded and used offline when no reliable internet connection is available. The SIS source code is open-source and free, which may be useful for country-led national Red List assessment initiatives (see below). Part of the information stored in the SIS is linked directly to the IUCN Red List website to allow public access to the final assessments.



Figure 4. The IUCN Species Information Service stores and manages all global Red List assessment data.

For Macedonia, the establishment of a digital database infrastructure that performs the same functions as the SIS and mirrors its structure is foreseen in the frames of the current project. Given the current Macedonian context, three options to establish such a national SIS equivalent are identified.

1. A **national species information system** can be established, either by adapting the global SIS source code to adjust its geographical, taxonomic and thematic scopes, or by creating a custom system from scratch based on a subset of fields that are present in the global SIS. The SIS provides a service, called ‘SIS.connect’, which helps to guide the development of such a custom system to ensure compatibility with the global SIS by detailing the required fields, their format, and other prerequisites. In either case, the established system should be interlinked with a publicly accessible website to provide access to the species assessments by policy-makers and the general public. The feasibility of establishing such a national system and the linked website depends on a couple of crucial factors. First, sufficient IT expertise as well as financial resources should be

- available within the country to set-up and maintain the system. Second, one or more institution(s) and physical location(s) will need to be identified to host the servers that will hold the system and the necessary back-up systems. Third, the identified host(s) will need to make the financial resources available to maintain hardware and software over longer periods of time. And fourth, the human and financial resources to update and add species assessments in the system should be available.
2. The **National Red List Working Group** (NRLWG – see also section 1.2 on p5) is working on a model national Red List database (in line with the IUCN SIS) that countries can use to conduct and store their national Red List assessments. This initiative is under development and unfortunately it is unlikely that it will be operational in time for deployment in the current project. Nonetheless, this option should not be disregarded entirely.
  3. A third option is to use the existing **global SIS** infrastructure. In this scenario, the national Red List assessments are entered directly into the global SIS system with a ‘Macedonia’-tag attached indicating that the assessment is a national assessment rather than a global assessment. Assessments marked with the ‘Macedonia’-tag will not be published on the IUCN Red List website, and thus will still need a locally built and maintained national Red List website that will use the IUCN Red List Application Program Interface (API) to retrieve the Macedonian assessments. In this option, the database infrastructure already is in place, and entering the assessments follows a well-tested and streamlined procedure that allows for remote collaboration between assessor team members. Local IT-expertise is required only to set up the national Red List website. On the other hand, the structure and data model of the global system may not allow for more detailed and nationally-relevant specification of data fields, taxonomy and classification schemes (e.g. habitats, threats). In addition, the working language will be English, which may be an important limitation. The addition of Macedonian endemics to the existing taxonomic backbone is possible, but needs to be facilitated by the IUCN Red List Unit, managing the SIS.

### 5.3.3 Geographic Information Systems

---

Geographic Information Systems (GIS) are computer systems that allow different types of spatial data to be captured, viewed, manipulated, analysed, summarised and presented. With GIS technology, people can compare the locations of different items in order to discover how they relate to each other. For example, using GIS, a single map could include sites that produce pollution, such as factories, and sites that are sensitive to pollution, such as wetlands and rivers. Such a map would help people determine where water supplies are most at risk. GIS is at the root of all modern spatial planning across all sectors of society, including conservation and red-listing.

In the red-listing data flow, GIS sits in the background of all steps in the process, from data gathering to policy development (see Figure 5). GIS is used in particular to calculate spatial parameters such as the Extent of Occurrence and Area of Occupancy, and to produce distribution

maps for each assessment. Since it is unlikely that each assessor team houses adequate GIS expertise for conducting these spatial tasks, it is expected that technical support will be needed. A couple of options are available. First, a GIS expert, dedicated to the project, could be assigned to see through the GIS needs of all assessments across taxonomic groups and assessor teams. A number of tools are available to fulfil the spatial needs of Red List assessments (e.g. QGIS; see also summary in MoEPP 2017). Alternatively, assessor teams could use an online tool that has specifically been developed to provide basic spatial data analysis functionality needed to inform Red List assessments (e.g. [geoCAT](#)). This tool calculates the Extent of Occurrence and the Area of Occupancy from geographic point data uploaded by the user, but does not produce distribution maps as specified by the IUCN guidelines (IUCN, 2013). In either case, the overall need for having GIS expertise available dedicated to the project could be an important factor to consider when deciding if and to what extent GIS maps are listed as required documentation.

*Note – The NISBD has a spatial component built in and could speed up the spatial part of the Red List assessments significantly. MoEPP (2017) lists a number of GIS tools available for establishing spatial connections between the NISBD and other databases (e.g. the NATURA2000 database structure) but notes that it may be a complex issue.*

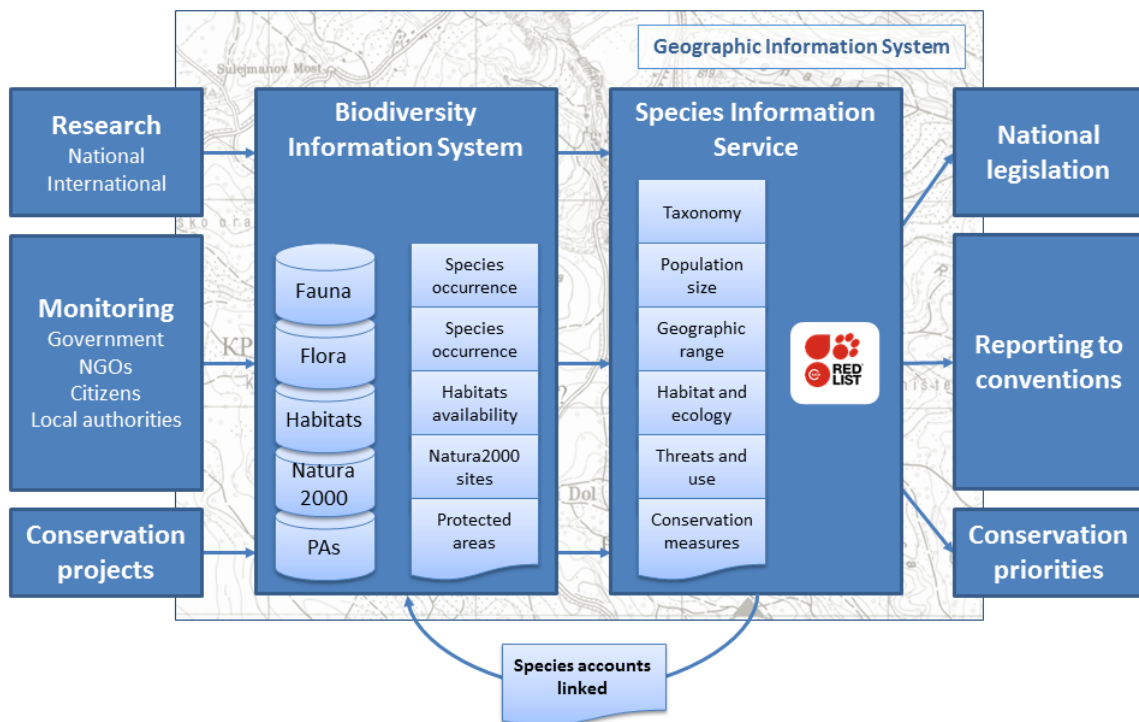


Figure 5. Schematic example of the potential biodiversity information flow for Red List assessments and related conservation policy.

## 6 CONCLUSIONS AND RECOMMENDATIONS

---

The global IUCN Red List has long been recognised as an important tool for evaluating and informing the world about the state of global biodiversity and for setting global conservation targets. At the national level, national Red Lists are of crucial importance for developing and improving national species conservation legislation (e.g. lists of Protected and Strictly Protected Species), guiding national conservation strategies and providing information for reporting to international conventions, particularly the Convention on Biological Diversity, the Convention on Trade in Endangered Species and the Convention on Migratory Species including a number of conventions under its framework.

### 6.1 Chalking out the process

---

The first lines to chalk are the borders of the national Red List playing field in Macedonia. The national Red List steering body is the referee, and will need to make decisions to delimit the scope of the current project. It is responsible for the selection of taxonomic groups, determining priority species, deciding the data management framework, organising reviews, deciding the publication options and providing advice for policy development. It will be a challenging game and chalking out the rules of the process is a crucial first step. The assessor teams are the key players, responsible for conducting the assessments, largely playing by the rules set by the steering body.

There is an active research community in Macedonia and its research activities have yielded data from a fairly widespread array of taxonomic groups. During the pre-assessment stage, available data for the selected species are collected. As a first step, this report provides an overview of the information available at large for the major, higher level taxonomic groups, but more detailed data gathering and analyses will have to be done for lower taxonomic ranks. While the Species Catalogue (MoEPP, 2010), including the necessary updates since its publication, may provide a good starting point, an overall taxonomic backbone to support the national Red List assessment is not available, and the taxonomic uncertainty in particular taxonomic groups may prevent the assessment of certain species. Similarly, any uncertainty about the definition and conservation responsibility of endemic species needs to be remedied before the target species within certain taxonomic groups can be identified. Information on the geographic distribution of most taxonomic groups is available either in point data or distribution maps, but may not cover the entire country nor be in a format that is directly useable for analysing and summarising into useful information for Red List assessments. Data on population size and life history are scarce for all taxonomic groups, whereas information on habitat requirements and ecology is more widely present among experts, albeit not necessarily in written format. For most taxonomic groups, traditional and commercial use of taxa is well-known, however data on harvest and trade is available only for a few taxonomic groups (e.g. fish, game, fungi). Such information is sometimes only present from related indicators that may or may not be representative for actu-

al trade or off-take (e.g. allowed harvest volume in permits may not accurately represent actual harvest volume). The global threats that affect the extinction risk of taxa are generally well-understood by experts, but quantitative data covering the country's territory is largely lacking. In terms of on-going conservation initiatives, habitat conservation through protected areas is a reasonable well-established practice in Macedonia. For example, notable efforts have been undertaken to designate Important Bird and Biodiversity Areas, Important Plant Areas, and Prime Butterfly Areas, and progress has been made designating National Parks, World Heritage, Emerald Network and Natura2000 sites. These area-based conservation initiatives have achieved variable levels of success in the country. However, conservation efforts targeting particular species or species groups are limited to a few taxonomic groups (e.g. Balkan lynx, vultures). In summary, the available data for Red List assessments is widespread across the taxonomic spectrum, but the depth, quantity, quality and accessibility of the data differ strongly between groups.

Red List assessments are preferably carried out by an assessor team of at least two people. The assessor team members select the priority taxa to be evaluated, collate and analyse the data, feed the results into the Red List assessment, and produce the necessary supporting information, including maps (possibly assisted by GIS expert). Many taxonomic groups lack data for some of the Red List Criteria used in the actual assessments. However, as pointed out in section 4.1 on p20, only one of the criteria needs to be met in order for a taxon to be assigned a threatened status, and the IUCN Categories and Criteria incorporate ways to deal with uncertainty in data sets. As assessments are being conducted, the information needs to be entered and stored in a digital data management structure. The national Red List steering body will need to decide on the preferred data management option. Due to funding limitations, a trade-off will occur between the amount of species assessed and the amount of additional field work conducted. Any funds spent on field work will reduce the time and funds available for increasing the number of purely desk-based assessments.

In addition, each assessment needs to be reviewed, and the national Red List steering body will need to decide on the review methods. Depending on the availability of sufficient local expertise, reviewers from the relevant IUCN Red List Authorities may need to be contacted. The time and financial resources required for the review add to the cost of every assessment. When assessments have been reviewed, a final consistency check will be conducted by IUCN before submission of the assessments for publication.

Publication of the conservation status of the assessed species is a crucial step to be taken in order for the national Red Lists to fulfil their many roles: awareness raising, policy-making, guiding conservation efforts, analysing country-wide biodiversity trends, providing species information for research, etc. The publication of the assessments is foreseen as digital species fact sheets, which may be presented as stand-alone files or through a national Red List website, or which-ever publication type is agreed by the national Red List steering body. Upon consultation with UN Environment, the publication of a printed book version of the Red List may be an option as well.

A final step, which is not included in the current project but is one of the main purposes of the entire red-listing exercise, is the translation of the species conservation status into policy and action on the ground. As is apparent from the long history of Red List plans in the strategic documents produced over the last decades in Macedonia (see section 3.2 on p17), one of the main uses of the national Red List is the revision of the national Lists of Protected and Strictly Protected Species (MoEPP, 2011). The national Red List steering committee is ideally placed to provide recommendations to policy-makers for adjustments of these lists based on the results of the all Red List assessments produced over the course of the current project, and beyond. In addition, the IUCN Red List Unit, which manages the global IUCN Red List, recommends that a national Species Action Plan be devised for species that are considered threatened on the national level. The development of Species Action Plans should ideally form part of a larger conservation planning effort and strategy, but the national conservation status of species can help determine priority species for such Species Action Plans.

## 6.2 Recommendations

---

In its role as facilitator, IUCN ECARO aims to guide the Macedonian red-listing process in a way that maximises both the efficiency and quality of work, making full use of the knowledge and capacity present within Macedonia. For a starting point, we can have a look at the national Red Lists processes in the region. However, as seen in section 5.2.1 on p32, limited information is available from these lists on the process used and decisions made. In this context, the European regional Red Lists produced in the last decade may provide a better example, and it is recommended to have a closer look at the latest ones (García Criado et al., 2017; Nieto et al., 2015). Nonetheless, several decisions are specific to the Macedonian situation, and some recommendations are listed below. However, the final decisions will remain the responsibility of the Macedonian institutions and experts, represented in the Red List steering body and the assessor teams. The recommendations listed below can guide these decisions and the associated discussions.

### **National Red List steering body and its responsibilities**

- Include representatives from MoEPP, academia, musea, NGOs, and on-going Red List project(s) (e.g. IUCN for the current RL assessments)
- Oversee and coordinate Red List activities within Macedonia in the long-term;
- Establish mechanisms for assessing and regularly re-assessing species following IUCN's Red List Categories and Criteria and guidelines, using the national Red List data management and publication facilities as the means to compile and submit data;
- Serve as the contact point between national Red List initiatives and IUCN (including IUCN Regional Office for Eastern Europe and Central Asia, IUCN Species Survival Commission and its Species Specialist Groups)

- Assist or advise the Ministry of Environment and Physical Planning and other relevant government agencies in drafting policy and legislation proposals relating to Red Lists and species conservation priorities.

### **Taxonomic representation**

- Use the result of the selection procedure (e.g. the ranking of taxonomic groups) to guide the identification of species conservation priorities.
- Maximise synergies between assessments in different taxonomic groups and take advantage of all combined expertise available within the country.
- Consider where Macedonia wants to focus its red-listing efforts: on well-known species, broad taxonomic coverage, or less-known species.
- Keep in mind the IUCN Red List 'Barometer of Life' efforts.

### **Taxa selection**

- Set a population threshold to exclude taxa that have only a marginal part of their global distribution within Macedonia
- Set rules (e.g. a time threshold) for determining whether a taxon is native or non-native.
- Use the schematic decision tree in Annex 3 of the IUCN Guidelines for application of IUCN Red List Criteria at regional and national levels (IUCN, 2012a) to determine which taxa to exclude across all taxonomic groups.
- Within taxonomic groups, assessor teams may specify additional rules to determine the final list of taxa to be assessed.

### **Endemism**

- Whenever endemism is mentioned, clearly specify the geographic extent.
- Determine a consistent way of dealing with near-endemics by setting criteria for inclusion (e.g. a near-endemic is excluded from the national Red List unless it meets a population threshold and data for the part of the population residing outside the country's boundaries is available).
- Keep the national red-listing procedure closely aligned with the global procedure to minimise complications in the assessment procedure arising from a taxon's endemism status.

### **Assessment**

- Conduct assessments as much as possible using the latest IUCN Categories and Criteria, including the regional guidelines and any guidelines specific to particular taxonomic groups.
- Document assessments in accordance with the Documentation standards and consistency checks for IUCN Red List assessments and species accounts (IUCN, 2013), making use of the existing Classification schemes as much as possible. All the guidelines,



standards and classification schemes can be found on the [‘Key documents’ section](#) of the IUCN Red List website.

- Where possible, approach the relevant Red List Authority and request an independent reviewer for the conducted national assessments. If the Red List Authority does not have the capacity (in terms of time or expertise) to conduct the review, alternative reviewers can be identified from within the country or neighbouring countries by the national Red List steering body.

### **Data management**

- Consider using IUCN’s global Species Information Service for Red List assessment data entry, storage and management. Despite the potential constraints resulting from using the standard global classification schemes, the resource demands for the other options presented in section 5.3.2 on p41 in terms of finances, infrastructure and capacity are expected to be beyond what is available within the project.
- Maintain distribution maps as required supporting information for the national Red List assessments.
- Appoint a GIS specialist to assist all assessor teams, where necessary, with mapping throughout the project.

### **Publication**

- Aim for the dual publication approach that is currently in use for IUCN regional Red Lists (see section 5.2.1 on p32). Digital publication of assessment should be considered priority to increase accessibility for the policy-makers, scientific community and general public.
- If the global SIS is used, the species assessments will be conducted and stored in English, and it is recommended that species fact sheets in Macedonian and Albanian are produced and made available through the national Red List website.
- Discuss the option of a printed book version of the assessments with UN Environment project team.

### **Reporting**

- The national Red List steering body and the assessor teams are recommended to meticulously document and justify each decision in the Macedonian Red List process and in all species assessments in order to convey universal credibility and authority to the final Red Lists. Providing only partial details on Red List procedures and decisions makes Red Lists vulnerable to criticism.
- The methods used for selecting the priority taxonomic groups are new for the region, and a detailed account will help its evaluation at the end of the project, in order to determine its potential use in other contexts.

- A well-documented Macedonian Red List could set a new standard for national Red Lists across the region.

#### **Translation into policy and action**

- Upon completion of the Red Lists, the national Red List steering body is recommended to compile a list of recommendations for adjusting policy documents (e.g. the lists of Protected and Strictly protected species), as well as for focussing research, monitoring, conservation, and outreach activities,
- Ideally, comprehensive Species Action Plans for a select number of endangered species are developed based on the Red Lists.

After going through the current document, it may be clear that the tasks ahead are certainly not minor, and will pose numerous challenges for all stakeholders involved. It is hoped that the vigour with which the Macedonian conservation community has been planning and fighting for Red List development for such a long time, will act as the driver for creatively and collaboratively tackling the challenges along the way, in order to construct an end product of a quality that all participants can be proud of and stand by. It is further hoped that the current document may serve to channel the energy in the right direction, and hence contribute in as far as it can to an improved set of species protection tools in Macedonia.

## REFERENCES

---

- Anchev, M., Apostolova, I., Assyov, B., Bancheva, S., Denchev, C., Dimitrov, D., Dimitrova, D., Evstatieva, L., Genova, E., Georgiev, V., Goranova, V., Gussev, C., Ignatova, P., Ivanova, D., Meshinev, T., Peev, D., Petrova, A., Petrova, A., Sopotlieva, D., Vladimirov, V., 2009. Red List of Bulgarian vascular plants. *Phytol. Balc.* 15, 63–94.
- Antolović, J., Flajšman, E., Frković, A., Grgurev, M., Grubešić, M., Hamidović, D., Holcer, D., Pavlinić, I., Vuković, M., Tvertković, N., 2006. *Crvena knjiga Sisavaca Hrvatske (Red Book of Mammals of Croatia)*. Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Azam, C.S., Gigot, G., Witte, I., Schatz, B., 2016. National and subnational Red Lists in European and Mediterranean countries: Current state and use for conservation. *Endanger. Species Res.* 30, 255–266. doi:10.3354/esr00740
- Belančić, A., Bogdanović, T., Franković, M., Ljuština, M., Mihoković, N., Vitas, B., 2008. *Crvena knjiga vretenaca Hrvatske (Red Book of Dragonflies of Croatia)*. Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Butchart, S.H.M., Resit Akçakaya, H., Chanson, J., Baillie, J.E.M., Collen, B., Quader, S., Turner, W.R., Amin, R., Stuart, S.N., Hilton-Taylor, C., 2007. Improvements to the Red List Index. *PLoS One* 2, e140. doi:10.1371/journal.pone.0000140
- Butchart, S.H.M., Stattersfield, A.J., Baillie, J., Bennun, L.A., Stuart, S.N., Akçakaya, H.R., Hilton-Taylor, C., Mace, G.M., 2005. Using Red List Indices to measure progress towards the 2010 target and beyond. *Philos. Trans. R. Soc. Lond. B. Biol. Sci.* 360, 255–68. doi:10.1098/rstb.2004.1583
- Butchart, S.H.M., Stattersfield, A.J., Bennun, L.A., Shutes, S.M., Akçakaya, H.R., Baillie, J.E.M., Stuart, S.N., Hilton-Taylor, C., Mace, G.M., 2004. Measuring Global Trends in the Status of Biodiversity: Red List Indices for Birds. *PLoS Biol.* 2, e383. doi:10.1371/journal.pbio.0020383
- Cardoso, P., Borges, P.A. V., Triantis, K.A., Ferrández, M.A., Martín, J.L., 2011. Adapting the IUCN Red List criteria for invertebrates. *Biol. Conserv.* 144, 2432–2440. doi:10.1016/j.biocon.2011.06.020
- Collen, B., Ram, M., Zamin, T., McRae, L., 2008. The Tropical Biodiversity Data Gap: Addressing Disparity in Global Monitoring. *Trop. Conserv. Sci.* 1, 75–88. doi:10.1177/194008290800100202
- Dahlberg, A., Mueller, G.M., 2011. Applying IUCN red-listing criteria for assessing and reporting on the conservation status of fungal species. *Fungal Ecol.* 4, 147–162. doi:10.1016/J.FUNECO.2010.11.001
- De Clerck, O., Guiry, M.D., Leliaert, F., Samyn, Y., Verbruggen, H., 2013. Algal Taxonomy: A Road to Nowhere? *J. Phycol.* doi:10.1111/jpy.12020
- García Criado, M., Väre, H., Nieto, A., Bento Elias, R., Dyer, R., Ivanenko, Y., Ivanova, D., Lansdown, R., Molina, J.A., Rouhan, G., Rumsey, F., Troia, A., Vrba, J., Christenhusz, M.J.M., 2017. *European Red List of Lycopods and Ferns*. Brussels, Belgium.
- Hallingbäck, T., Hodgetts, N.G., Raeymaekers, G., Schumacker, R., Sergio, S., Söderström, L., Stewart, N., Vana, J., 1998. Guidelines for application of the revised IUCN threat categories to bryophytes. *Lindbergia* 23, 6–12.
- Hristovski, S., Slavevska-Stamenković, V., Hristovski, N., Arsovski, K., Bekchiev, R., Chobanov, D., Dedov, I., Devetak, D., Karaman, I., Kitanova, D., Komnenov, M., Ljubomirov, T., Melovski, D., Pešić, V., Simov, N., 2015. Diversity of invertebrates in the Republic of Macedonia

- Диверзитет на безрбетниците во Република Македонија. *Maced. J. Ecol. Environ.* 17, 5–44.
- IUCN, 2017a. Historical IUCN Red Data Books and Red Lists [WWW Document]. IUCN Red List Threat. Species. URL <http://www.iucnredlist.org/about/publication/historical-red-lists> (accessed 10.10.17).
- IUCN, 2017b. Guidelines for Using the IUCN Red List Categories and Criteria. Version 13. Gland, Switzerland.
- IUCN, 2017c. IUCN Red List of Threatened Species 2017-2 [WWW Document]. IUCN Red List Threat. Species.
- IUCN, 2016. A Global Standard for the Identification of Key Biodiversity Areas. Version 1.0. Gland, Switzerland.
- IUCN, 2013. Documentation standards and consistency checks for IUCN Red List assessments and species accounts. Version 2. Gland, Switzerland.
- IUCN, 2012a. Guidelines for application of IUCN Red List Criteria at regional and national levels (Version 4.0). Gland, Switzerland and Cambridge, UK.
- IUCN, 2012b. IUCN Red List Categories and Criteria Version 3.1. International Union for the Conservation of Nature, Gland, Switzerland and Cambridge, UK. doi:10.9782-8317-0633-5
- Janák, M., Marhoul, P., Matějů, J., 2013. Action Plan for the Conservation of the European Ground Squirrel *Spermophilus citellus* in the European Union List of contributors, European Commission.
- Jelić, D., Kuljerić, M., Koren, T., Treer, D., Šalamon, D., Lončar, M., Podnar Lešić, M., Janev Hutinec, B., Bogdanović, T., Mekinić, S., Jelić, K., 2016. Crvena knjiga vodozemaca i gmazova Hrvatske (Red Book of Amphibians and Reptiles of Croatia). Ministry of Environmental and Nature Protection State, State Institute for Nature Protection, Zagreb, Croatia.
- Karadelev, M., Rusevska, K., 2016. Distribution Maps of Critical Endangered Species from Macedonian Red List of Fungi. *Hyla* 2016, 14–18.
- Karadelev, M., Rusevska, K., 2012. Contribution to the Macedonian Red List of Fungi, in: Proceedings of the 4th Congress of Ecologists of Macedonia with International Participation, Ohrid, 12-15 October 2012. Macedonian Ecological Society, Skopje, Republic of Macedonia, pp. 68–73.
- Keith, D.A., Rodríguez, J.P., Brooks, T.M., Burgman, M.A., Barrow, E.G., Bland, L., Comer, P.J., Franklin, J., Link, J., Mccarthy, M.A., Miller, R.M., Murray, N.J., Nel, J., Nicholson, E., Oliveira-Miranda, M.A., Regan, T.J., Rodríguez-Clark, K.M., Rouget, M., Spalding, M.D., 2015. The IUCN red list of ecosystems: Motivations, challenges, and applications. *Conserv. Lett.* doi:10.1111/conl.12167
- Keith, D.A., Rodríguez, J.P., Rodríguez-Clark, K.M., Nicholson, E., Aapala, K., Alonso, A., Asmussen, M., Bachman, S., Basset, A., Barrow, E.G., Benson, J.S., Bishop, M.J., Bonifacio, R., Brooks, T.M., Burgman, M.A., Comer, P., Comín, F.A., Essl, F., Faber-Langendoen, D., Fairweather, P.G., Holdaway, R.J., Jennings, M., Kingsford, R.T., Lester, R.E., Nally, R. Mac, McCarthy, M.A., Moat, J., Oliveira-Miranda, M.A., Pisanu, P., Poulin, B., Regan, T.J., Riecken, U., Spalding, M.D., Zambrano-Martínez, S., 2013. Scientific Foundations for an IUCN Red List of Ecosystems. *PLoS One*. doi:10.1371/journal.pone.0062111
- Krpač, V.T., Darceumont, C., 2012. Red List Of Butterflies (Lepidoptera: Hesperioidea & Papilionoidea) For Republic Of Macedonia. *Rev. Écologique (Terre Vie)* 67.
- Kryštufek, B., Bryja, J., Bužan, E. V, 2009. Mitochondrial phylogeography of the European ground squirrel, *Spermophilus citellus*, yields evidence on refugia for steppic taxa in the southern Balkans. *Heredity (Edinb.)*. 103, 129–135. doi:10.1038/hdy.2009.41

- Lelo, S., Zimić, A., Šunje, E., 2016. Crvena lista gmizavaca (Chordata : Vertebrata : Reptilia) Federacije Bosne i Hercegovine. *UZIZAŽ* 12, 31–42.
- Lemonnier-Darcemont, M., Chobanov, D., Krpač, V.T., 2014. Red list of orthoptera of the Republic of Macedonia. *Rev. d'Ecologie (La Terre la Vie)* 69, 151–158.
- Matevski, V., 2014. Flora na republika makedonija, II,1, II. ed. Macedonian Academy of sciences and arts, Skopje, Republic of Macedonia.
- McLellan, B.N., Proctor, M.F., Huber, D., Michel, S., 2017. *Ursus arctos*. IUCN Red List Threat. Species. doi:http://dx.doi.org/10.2305/IUCN.UK.2017-1.RLTS.T41688A114261661.en
- McLellan, B.N., Proctor, M.F., Huber, D., Mitchel, S., 2016. *Ursus arctos* Isolated Populations (Supplementary material to *Ursus arctos* Redlisting account). IUCN Red List Threat. Species. doi:10.2305/IUCN.UK.2016-3.RLTS.T41688A45034772.en
- Melovski, D., Breitenmoser, U., von Arx, M., Breitenmoser-Würsten, C., Lanz, T., 2015. *Lynx lynx* ssp. *balcanicus*. IUCN Red List Threat. Species 2017–2.
- Melovski, L., Veleviski, M., Matevski, V., Avukatov, V., Sarov, A., 2012. Using important plant areas and important bird areas to identify Key Biodiversity Areas in the Republic of Macedonia. *J. Threat. Taxa* 4, 2766–2778. doi:10.11609/JoTT.o2997.2766-78
- Michev, T., Boev, Z., Kambourova, N., 2011. Red list of the birds of bulgaria, in: Jubilee National Scientific Conference with International Participation “The Man and the Universe.” Smolyan, Bulgaria.
- MoEPP, 2017. Strengthening the capacities for implementation of Natura 2000: Study on development of Geographic Information System (GIS) for nature protected sites DRAF (Version 2). Ministry of Environment and Physical Planning, Skopje, Republic of Macedonia.
- MoEPP, 2016. National Strategy for Nature Conservation (in Macedonian). Министерство за животna sredina i prostorno planiranje, Skopje, Republic of Macedonia.
- MoEPP, 2014a. Draft National Biodiversity Strategy and Action Plan. Ministry of Environment and Physical Planning, Skopje, Republic of Macedonia.
- MoEPP, 2014b. FIFTH NATIONAL REPORT to the Convention on Biological Diversity of the Republic of Macedonia. Ministry of Environment and Physical Planning, Skopje, Republic of Macedonia.
- MoEPP, 2011. ЛИСТИ ЗА УТВРДУВАЊЕ НА СТРОГО ЗАШТИТЕНИ И ЗАШТИТЕНИ ДИВИ ВИДОВИ. *Off. Gaz. Repub. Maced.* no. 139 Oct. 7, 2011 1–22.
- MoEPP, 2010. Assessment and evaluation of Biodiversity on National level: Report and National Catalogue (Check List) of Species.
- MoEPP, 2006. Second national environmental action plan. Ministry of Environment and Physical Planning, Skopje, Republic of Macedonia. doi:10.1016/j.ajodo.2005.02.022
- Natcheva, R., Ganeva, A., Spiridonov, G., 2006. Red List of the bryophytes in Bulgaria. *Phytol. Balc.* 12, 55–62.
- Nieto, A., Roberts, S.P.M., Kemp, J., Rasmont, P., Kuhlmann, M., Criado, M.G., Biesmeijer, J.C., Bogusch, P., Dathe, H.H., Rúa, P.D. La, Meulemeester, T. De, Dehon, M., Dewulf, A., Ortiz-Sánchez, F.J., Lhomme, P., Pauly, A., Potts, S.G., Praz, C., Quaranta, M., Radchenko, V.G., Scheuchl, E., Smit, J., Straka, J., Terzo, M., Tomozii, B., Window, J., Michez, D., 2015. European Red List of Bees, Luxembourg: Publication Office of the European Union. doi:10.2779/77003
- Ozimec, R., Bedek, J., Gottstein, S., Jalžić, B., Slapnik, R., Štamol, V., Bilandžija, H., Dražina, T., Kletečki, E., Komerički, A., Lukić, M., Pavlek, M., 2009. Crvena knjiga špiljske faune Hrvatske (Red Book of Croatian cave dwelling fauna). Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Papp, B., Szurdoki, E., Pantovic, J., Saboljevic, M., 2016. Contributions to the bryophyte flora of

- the Mavrovo National Park (Republic of Macedonia). *Stud. Bot. hungarica* 47, 279–296. doi:10.17110/StudBot.2014.45.33
- Radford, E.A., Odé, B., 2009. *Conserving important plant areas: investing in the green gold of South East Europe*. Salsbury, UK.
- Radović, D., Kralj, J., Tutiš, V., Ćiković, D., 2003. *Crvena knjiga ugroženi ptica Hrvatske (Red Data Book of Birds of Croatia)*. Ministarstvo zaštite okoliša i prostornog uređenja, Zagreb, Croatia.
- Rodrigues, A.S.L., Brooks, T.M., Butchart, S.H.M., Chanson, J., Cox, N., Hoffmann, M., Stuart, S.N., 2014. Spatially Explicit Trends in the Global Conservation Status of Vertebrates. *PLoS One* 9, e113934. doi:10.1371/journal.pone.0113934
- Rodrigues, A.S.L., Pilgrim, J.D., Lamoreux, J.F., Hoffmann, M., Brooks, T.M., 2006. The value of the IUCN Red List for conservation. *Trends Ecol. Evol.* 21, 71–76. doi:10.1016/j.tree.2005.10.010
- Sabovljevic, M., Cvetić, T., Stevanovic, V., 2004. Bryophyte Red List of Serbia and Montenegro. *Biodivers. Conserv.* 13, 1781–1790. doi:10.1023/B:BIOC.0000029338.97776.66
- Siemińska, J., Bąk, M., Dziedzic, J., Gąbka, M., Gregorowicz, P., Mrozińska, T., Pełechaty, M., Owslanny, P.M., Pliński, M., Witkowski, A., 2006. Red list of the algae in Poland, in: Mirek, Z., Zarzycki, K., Wojewoda, W., Zbigniew, S. (Eds.), *Red List of Plants and Fungi in Poland*. W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków, Poland.
- SSO, 2015. *Environmental Statistics 2015*. State Statistical Office, Skopje, Republic of Macedonia.
- Sterijovski, B., Tomović, L., Ajtić, R., 2014. Contribution to the knowledge of the reptile fauna and diversity in FYR of Macedonia. *North. West. J. Zool.* 10, 83–92.
- Stojanović, D. V., Ćurčić, S.B., Ćurčić, B.P.M., Makarov, S.E., 2013. The application of IUCN Red List criteria to assess the conservation status of moths at the regional level: a case of provisional Red List of Noctuidae (Lepidoptera) in Serbia. *J. Insect Conserv.* 17, 451–464. doi:10.1007/s10841-012-9527-7
- Temniskova, D., Stoyneva, M.P., Kirjakov, I.K., 2008. Red List of the Bulgarian algae . I . Macroalgae. *Phytol. Balc.* 14, 193–206.
- Teofilovski, A., 2017. Contribution to knowledge of the flora of the Republic of Macedonia. *Bot. Serbica* 41, 99–103. doi:10.5281/zenodo.456499
- Triantaphyllou, E., 2000. *Multi-criteria Decision Making Methods: A Comparative Study, Applied Optimization*. Springer US, Boston, MA. doi:10.1007/978-1-4757-3157-6
- Uhrin, M., Peter Havaš, Martin Minařík, Karel Kodejš, Imrich Bugoš, Stanislav Danko, Tomáš Husák, Daniel Koleska, Daniel Jablonski, 2016. Distribution updates to amphibian and reptile fauna for the Republic of Macedonia. *Herpetol. Notes* 9, 201–220.
- Velevski, M., Hallmann, B., Grubač, B., Lisičanec, T., Stoynov, E., Lisičanec, E., Avukatov, V., Božič, L., Stumberger, B., 2010. Important Bird Areas in Macedonia: Sites of Global and European Importance. *Acrocephalus* 31, 181–282. doi:10.2478/v10100-010-0009-2
- Velevski, M., Vasić, V., 2017. Annotated check - list of the birds of the Republic of Macedonia. *Acta Musei Maced. Sci. Nat.* 20, 53–76.
- Verovnik, R., Micevski, B., Đurić, M., Jakšić, P., Keymeulen, A., Van Swaay, C., Veling, K., 2010. Contribution to the knowledge of the butterfly fauna of the Republic of Macedonia (Lepidoptera: Papilionoidea & Hesperioidea). *Acta Entomol. Slov.* 18, 31–46.
- Zamin, T.J., Baillie, J.E.M., Miller, R.M., Paul, J., Iiguez, R., Ardid, A., Collen, B., Rojas, L., Más, N., De La Meta, A., 2010. National Red Listing Beyond the 2010 Target. *Conserv. Biol.* 24, 1012–1020. doi:10.1111/j.1523-1739.2010.01492.x

## **APPENDIX A**

---

Summary of the five Criteria used to evaluate if a taxon belongs in an IUCN Red List Threatened Category (Critically Endangered, Endangered or Vulnerable).

**SUMMARY OF THE FIVE CRITERIA (A-E) USED TO EVALUATE IF A TAXON BELONGS IN AN IUCN RED LIST THREATENED CATEGORY (CRITICALLY ENDANGERED, ENDANGERED OR VULNERABLE).<sup>1</sup>**

<b>A. Population size reduction.</b> Population reduction (measured over the longer of 10 years or 3 generations) based on any of A1 to A4			
	<b>Critically Endangered</b>	<b>Endangered</b>	<b>Vulnerable</b>
<b>A1</b>	≥ 90%	≥ 70%	≥ 50%
<b>A2, A3 &amp; A4</b>	≥ 80%	≥ 50%	≥ 30%
<p><b>A1</b> Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible AND understood AND have ceased.</p> <p><b>A2</b> Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased OR may not be understood OR may not be reversible.</p> <p><b>A3</b> Population reduction projected, inferred or suspected to be met in the future (up to a maximum of 100 years) [(a) cannot be used for A3].</p> <p><b>A4</b> An observed, estimated, inferred, projected or suspected population reduction where the time period must include both the past and the future (up to a max. of 100 years in future), and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible.</p>	<i>based on any of the following:</i>		<p>(a) direct observation [except A3]</p> <p>(b) an index of abundance appropriate to the taxon</p> <p>(c) a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality</p> <p>(d) actual or potential levels of exploitation</p> <p>(e) effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.</p>
<b>B. Geographic range in the form of either B1 (extent of occurrence) AND/OR B2 (area of occupancy)</b>			
	<b>Critically Endangered</b>	<b>Endangered</b>	<b>Vulnerable</b>
<b>B1.</b> Extent of occurrence (EOO)	< 100 km <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
<b>B2.</b> Area of occupancy (AOO)	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>
<b>AND at least 2 of the following 3 conditions:</b>			
(a) Severely fragmented OR Number of locations	= 1	≤ 5	≤ 10
(b) Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals			
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (iv) number of mature individuals			
<b>C. Small population size and decline</b>			
	<b>Critically Endangered</b>	<b>Endangered</b>	<b>Vulnerable</b>
<b>Number of mature individuals</b>	< 250	< 2,500	< 10,000
<b>AND at least one of C1 or C2</b>			
<b>C1.</b> An observed, estimated or projected continuing decline of at least (up to a max. of 100 years in future):	25% in 3 years or 1 generation (whichever is longer)	20% in 5 years or 2 generations (whichever is longer)	10% in 10 years or 3 generations (whichever is longer)
<b>C2.</b> An observed, estimated, projected or inferred continuing decline AND at least 1 of the following 3 conditions:			
(a) (i) Number of mature individuals in each subpopulation	≤ 50	≤ 250	≤ 1,000
(ii) % of mature individuals in one subpopulation =	90–100%	95–100%	100%
(b) Extreme fluctuations in the number of mature individuals			
<b>D. Very small or restricted population</b>			
	<b>Critically Endangered</b>	<b>Endangered</b>	<b>Vulnerable</b>
<b>D.</b> Number of mature individuals	< 50	< 250	<b>D1.</b> < 1,000
<b>D2.</b> Only applies to the VU category Restricted area of occupancy or number of locations with a plausible future threat that could drive the taxon to CR or EX in a very short time.	-	-	<b>D2.</b> typically: AOO < 20 km <sup>2</sup> or number of locations ≤ 5
<b>E. Quantitative Analysis</b>			
	<b>Critically Endangered</b>	<b>Endangered</b>	<b>Vulnerable</b>
<b>Indicating the probability of extinction in the wild to be:</b>	≥ 50% in 10 years or 3 generations, whichever is longer (100 years max.)	≥ 20% in 20 years or 5 generations, whichever is longer (100 years max.)	≥ 10% in 100 years

<sup>1</sup> Use of this summary sheet requires full understanding of the *IUCN Red List Categories and Criteria* and *Guidelines for Using the IUCN Red List Categories and Criteria*. Please refer to both documents for explanations of terms and concepts used here.



## **APPENDIX B**

---

Species protection overview from the project 'Strengthening of ecological, institutional and financial sustainability of the system of protected areas in the Republic of Macedonia'

Table 1. Comparative overview of species from the project 'Strengthening of ecological, institutional and financial sustainability of the system of protected areas in the Republic of Macedonia'.

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<b>ALGAE (Algae)</b>														
<i>Achnanthes jakovljevicii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Achnanthes jakovljevicii</i>	<i>Achnanthes jakovljevicii</i>
<i>Achnanthes minuscula</i>			None	None	None	None	No data	None	None	MKD	No		<i>Achnanthes minuscula</i>	<i>Achnanthes minuscula</i>
<i>Amphora brevis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora brevis</i>	<i>Amphora brevis</i>
<i>Amphora crawfordii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora crawfordii</i>	<i>Amphora crawfordii</i>
<i>Amphora cuneatiformis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora cuneatiformis</i>	<i>Amphora cuneatiformis</i>
<i>Amphora micra</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora micra</i>	<i>Amphora micra</i>
<i>Amphora ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora ohridana</i>	<i>Amphora ohridana</i>
<i>Amphora ovalis</i> var. <i>lata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora ovalis</i> var. <i>lata</i>	<i>Amphora ovalis</i> var. <i>lata</i>
<i>Amphora prespanensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora prespanensis</i>	<i>Amphora prespanensis</i>
<i>Amphora pseudaequalis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora pseudaequalis</i>	<i>Amphora pseudaequalis</i>
<i>Amphora pseudoeximia</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora pseudoeximia</i>	<i>Amphora pseudoeximia</i>
<i>Amphora pseudominutissima</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora pseudominutissima</i>	<i>Amphora pseudominutissima</i>
<i>Amphora pura</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora pura</i>	<i>Amphora pura</i>
<i>Amphora recens</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora recens</i>	<i>Amphora recens</i>
<i>Amphora recondita</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora recondita</i>	<i>Amphora recondita</i>
<i>Amphora sanctinaumii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora sanctinaumii</i>	<i>Amphora sanctinaumii</i>
<i>Amphora transsylvanica</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Amphora transsylvanica</i>	<i>Amphora transsylvanica</i>
<i>Amphora vetula</i>			None	None	None	None	No data	None	None	MKD	No		<i>Amphora vetula</i>	<i>Amphora vetula</i>
<i>Anabaena hallensis</i> var. <i>campaniensis</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Anabaena hallensis</i> var. <i>campaniensis</i>	<i>Anabaena hallensis</i> var. <i>campaniensis</i>
<i>Aneumastus albanicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus albanicus</i>	<i>Aneumastus albanicus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Aneumastus humboldtianus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus humboldtianus</i>	<i>Aneumastus humboldtianus</i>
<i>Aneumastus juriljii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus juriljii</i>	<i>Aneumastus juriljii</i>
<i>Aneumastus macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus macedonicus</i>	<i>Aneumastus macedonicus</i>
<i>Aneumastus metzeltinii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus metzeltinii</i>	<i>Aneumastus metzeltinii</i>
<i>Aneumastus minor</i> var. <i>densestriata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus minor</i> var. <i>densestriata</i>	<i>Aneumastus minor</i> var. <i>densestriata</i>
<i>Aneumastus ochridanus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus ochridanus</i>	<i>Aneumastus ochridanus</i>
<i>Aneumastus pseudapiculatus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus pseudapiculatus</i>	<i>Aneumastus pseudapiculatus</i>
<i>Aneumastus rhombicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus rhombicus</i>	<i>Aneumastus rhombicus</i>
<i>Aneumastus rosettae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus rosettae</i>	<i>Aneumastus rosettae</i>
<i>Aneumastus rostratus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus rostratus</i>	<i>Aneumastus rostratus</i>
<i>Aneumastus subapiculatus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aneumastus subapiculatus</i>	<i>Aneumastus subapiculatus</i>
<i>Bitrichia ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Bitrichia ohridana</i>	<i>Bitrichia ohridana</i>
<i>Caloneis acuta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Caloneis acuta</i>	<i>Caloneis acuta</i>
<i>Caloneis biconstrictoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Caloneis biconstrictoides</i>	<i>Caloneis biconstrictoides</i>
<i>Caloneis clavicula</i>			None	None	None	None	No data	None	None	MKD	No		<i>Caloneis clavicula</i>	<i>Caloneis clavicula</i>
<i>Caloneis macedonica</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Caloneis macedonica</i>	<i>Caloneis macedonica</i>
<i>Caloneis meridionalis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Caloneis meridionalis</i>	<i>Caloneis meridionalis</i>
<i>Calothrix inaequabilis</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Calothrix inaequabilis</i>	<i>Calothrix inaequabilis</i>
<i>Campliodiscus echinatus</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campliodiscus echinatus</i>	<i>Campliodiscus echinatus</i>
<i>Campylodiscus chadoi</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campylodiscus chadoi</i>	<i>Campylodiscus chadoi</i>
<i>Campylodiscus hibernicus</i> var. <i>transsylvanicus</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campylodiscus hibernicus</i> var. <i>transsylvanicus</i>	<i>Campylodiscus hibernicus</i> var. <i>transsylvanicus</i>
<i>Campylodiscus juriljii</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campylodiscus juriljii</i>	<i>Campylodiscus juriljii</i>
<i>Campylodiscus marginatus</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campylodiscus marginatus</i>	<i>Campylodiscus marginatus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Campylodiscus marginatus</i> var. <i>rudis</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campylodiscus marginatus</i> var. <i>rudis</i>	<i>Campylodiscus marginatus</i> var. <i>rudis</i>
<i>Campylodiscus marginatus</i> var. <i>tenuis</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campylodiscus marginatus</i> var. <i>tenuis</i>	<i>Campylodiscus marginatus</i> var. <i>tenuis</i>
<i>Campylodiscus pervulsus</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campylodiscus pervulsus</i>	<i>Campylodiscus pervulsus</i>
<i>Campylodiscus spinosus</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campylodiscus spinosus</i>	<i>Campylodiscus spinosus</i>
<i>Campylodiscus striatus</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Campylodiscus striatus</i>	<i>Campylodiscus striatus</i>
<i>Ceratium monoceras</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ceratium monoceras</i>	<i>Ceratium monoceras</i>
<i>Chara ohridana</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Chara ohridana</i>	<i>Chara ohridana</i>
<i>Closterium macedonicum</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Closterium macedonicum</i>	<i>Closterium macedonicum</i>
<i>Cocconeis robusta</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Cocconeis robusta</i>	<i>Cocconeis robusta</i>
<i>Cosmarium planctonicum</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Cosmarium planctonicum</i>	<i>Cosmarium planctonicum</i>
<i>Cosmarium strugense</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Cosmarium strugense</i>	<i>Cosmarium strugense</i>
<i>Cosmarium subprotumidum</i> var. <i>peristerii</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Cosmarium subprotumidum</i> var. <i>peristerii</i>	<i>Cosmarium subprotumidum</i> var. <i>peristerii</i>
<i>Cyclotella fottii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cyclotella fottii</i>	<i>Cyclotella fottii</i>
<i>Cyclotella verrucosa</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Cyclotella verrucosa</i>	<i>Cyclotella verrucosa</i>
<i>Cymatopleura acutiformis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymatopleura acutiformis</i>	<i>Cymatopleura acutiformis</i>
<i>Cymatopleura solea</i> var. <i>obtusata</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Cymatopleura solea</i> var. <i>obtusata</i>	<i>Cymatopleura solea</i> var. <i>obtusata</i>
<i>Cymbella exigua</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymbella exigua</i>	<i>Cymbella exigua</i>
<i>Cymbella melovskii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymbella melovskii</i>	<i>Cymbella melovskii</i>
<i>Cymbella modica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymbella modica</i>	<i>Cymbella modica</i>
<i>Cymbella neoleptoceroides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymbella neoleptoceroides</i>	<i>Cymbella neoleptoceroides</i>
<i>Cymbella ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymbella ohridana</i>	<i>Cymbella ohridana</i>
<i>Cymbella perexigua</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymbella perexigua</i>	<i>Cymbella perexigua</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Cymboplectura juriljii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymboplectura juriljii</i>	<i>Cymboplectura juriljii</i>
<i>Cymboplectura macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymboplectura macedonica</i>	<i>Cymboplectura macedonica</i>
<i>Cymboplectura petrovskae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymboplectura petrovskae</i>	<i>Cymboplectura petrovskae</i>
<i>Cymboplectura tumida</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cymboplectura tumida</i>	<i>Cymboplectura tumida</i>
<i>Cystodinium dominii</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Cystodinium dominii</i>	<i>Cystodinium dominii</i>
<i>Diatoma angusticostata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Diatoma angusticostata</i>	<i>Diatoma angusticostata</i>
<i>Diatoma densicostata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Diatoma densicostata</i>	<i>Diatoma densicostata</i>
<i>Diatoma minuta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Diatoma minuta</i>	<i>Diatoma minuta</i>
<i>Diatoma ochridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Diatoma ochridana</i>	<i>Diatoma ochridana</i>
<i>Diploneis budayana</i> var. <i>punctata</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Diploneis budayana</i> var. <i>punctata</i>	<i>Diploneis budayana</i> var. <i>punctata</i>
<i>Diploneis heisingeriae</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Diploneis heisingeriae</i>	<i>Diploneis heisingeriae</i>
<i>Diploneis modica</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Diploneis modica</i>	<i>Diploneis modica</i>
<i>Diploneis ostracodarum</i> var. <i>elongata</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Diploneis ostracodarum</i> var. <i>elongata</i>	<i>Diploneis ostracodarum</i> var. <i>elongata</i>
<i>Diploneis praeclara</i> var. <i>densa</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Diploneis praeclara</i> var. <i>densa</i>	<i>Diploneis praeclara</i> var. <i>densa</i>
<i>Diploneis tavcharii</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Diploneis tavcharii</i>	<i>Diploneis tavcharii</i>
<i>Dispora vilhelmii</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Dispora vilhelmii</i>	<i>Dispora vilhelmii</i>
<i>Encyonema macedonicum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Encyonema macedonicum</i>	<i>Encyonema macedonicum</i>
<i>Encyonema ochridanum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Encyonema ochridanum</i>	<i>Encyonema ochridanum</i>
<i>Epithemia fracta</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Epithemia fracta</i>	<i>Epithemia fracta</i>
<i>Epithemia lunata</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Epithemia lunata</i>	<i>Epithemia lunata</i>
<i>Epithemia lunata</i> var. <i>obesa</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Epithemia lunata</i> var. <i>obesa</i>	<i>Epithemia lunata</i> var. <i>obesa</i>
<i>Epithemia ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Epithemia ohridana</i>	<i>Epithemia ohridana</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Fallacia ochridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Fallacia ochridana</i>	<i>Fallacia ochridana</i>
<i>Fallacia omissa</i>			None	None	None	None	No data	None	None	MKD	No		<i>Fallacia omissa</i>	<i>Fallacia omissa</i>
<i>Fallacia submitis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Fallacia submitis</i>	<i>Fallacia submitis</i>
<i>Fragilaria micra</i>			None	None	None	None	No data	None	None	MKD	No		<i>Fragilaria micra</i>	<i>Fragilaria micra</i>
<i>Geissleria ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Geissleria ohridana</i>	<i>Geissleria ohridana</i>
<i>Gomphoneis ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphoneis ohridana</i>	<i>Gomphoneis ohridana</i>
<i>Gomphoneis prespanensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphoneis prespanensis</i>	<i>Gomphoneis prespanensis</i>
<i>Gomphonema balcanicum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema balcanicum</i>	<i>Gomphonema balcanicum</i>
<i>Gomphonema densistriatum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema densistriatum</i>	<i>Gomphonema densistriatum</i>
<i>Gomphonema fonticulum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema fonticulum</i>	<i>Gomphonema fonticulum</i>
<i>Gomphonema irroratum</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Gomphonema irroratum</i>	<i>Gomphonema irroratum</i>
<i>Gomphonema juriljii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema juriljii</i>	<i>Gomphonema juriljii</i>
<i>Gomphonema linearoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema linearoides</i>	<i>Gomphonema linearoides</i>
<i>Gomphonema mihoi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema mihoi</i>	<i>Gomphonema mihoi</i>
<i>Gomphonema perolivaceoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema perolivaceoides</i>	<i>Gomphonema perolivaceoides</i>
<i>Gomphonema perolivaceolacuum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema perolivaceolacuum</i>	<i>Gomphonema perolivaceolacuum</i>
<i>Gomphonema sancti-naumii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema sancti-naumii</i>	<i>Gomphonema sancti-naumii</i>
<i>Gomphonema subaequale</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema subaequale</i>	<i>Gomphonema subaequale</i>
<i>Gomphonema subolivaceum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphonema subolivaceum</i>	<i>Gomphonema subolivaceum</i>
<i>Gomphosphenia tenuis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gomphosphenia tenuis</i>	<i>Gomphosphenia tenuis</i>
<i>Gyrosigma macedonicum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyrosigma macedonicum</i>	<i>Gyrosigma macedonicum</i>
<i>Halamphora parathumensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Halamphora parathumensis</i>	<i>Halamphora parathumensis</i>
<i>Hydrocoleus stankovici</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Hydrocoleus stankovici</i>	<i>Hydrocoleus stankovici</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Karayevia clevei</i> var. <i>balcanica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Karayevia clevei</i> var. <i>balcanica</i>	<i>Karayevia clevei</i> var. <i>balcanica</i>
<i>Karayevia clevei</i> var. <i>balcanica</i> f. <i>rostrata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Karayevia clevei</i> var. <i>balcanica</i> f. <i>rostrata</i>	<i>Karayevia clevei</i> var. <i>balcanica</i> f. <i>rostrata</i>
<i>Klinodiscus obliquus</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Klinodiscus obliquus</i>	<i>Klinodiscus obliquus</i>
<i>Krsticiella ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Krsticiella ohridana</i>	<i>Krsticiella ohridana</i>
<i>Leptocinclis plana</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Leptocinclis plana</i>	<i>Leptocinclis plana</i>
<i>Lyngbia martensiana</i> fo. <i>macedonica</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Lyngbia martensiana</i> fo. <i>macedonica</i>	<i>Lyngbia martensiana</i> fo. <i>macedonica</i>
<i>Lyngbia nigra</i> fo. <i>lichnida</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Lyngbia nigra</i> fo. <i>lichnida</i>	<i>Lyngbia nigra</i> fo. <i>lichnida</i>
<i>Microcoleus ivlevii</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Microcoleus ivlevii</i>	<i>Microcoleus ivlevii</i>
<i>Navicula blazenciciae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula blazenciciae</i>	<i>Navicula blazenciciae</i>
<i>Navicula cadoi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula cadoi</i>	<i>Navicula cadoi</i>
<i>Navicula hastata</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Navicula hastata</i>	<i>Navicula hastata</i>
<i>Navicula hastatula</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula hastatula</i>	<i>Navicula hastatula</i>
<i>Navicula inclinata</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Navicula inclinata</i>	<i>Navicula inclinata</i>
<i>Navicula krsticii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula krsticii</i>	<i>Navicula krsticii</i>
<i>Navicula melovskii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula melovskii</i>	<i>Navicula melovskii</i>
<i>Navicula ognjanovae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula ognjanovae</i>	<i>Navicula ognjanovae</i>
<i>Navicula parahasta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula parahasta</i>	<i>Navicula parahasta</i>
<i>Navicula paraobesa</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula paraobesa</i>	<i>Navicula paraobesa</i>
<i>Navicula perturbata</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Navicula perturbata</i>	<i>Navicula perturbata</i>
<i>Navicula perturbata</i> var. <i>lata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula perturbata</i> var. <i>lata</i>	<i>Navicula perturbata</i> var. <i>lata</i>
<i>Navicula petrovskae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula petrovskae</i>	<i>Navicula petrovskae</i>
<i>Navicula prespanensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula prespanensis</i>	<i>Navicula prespanensis</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Navicula pseudoantonii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula pseudoantonii</i>	<i>Navicula pseudoantonii</i>
<i>Navicula reinhardtii</i> var. <i>rhomboelliptica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula reinhardtii</i> var. <i>rhomboelliptica</i>	<i>Navicula reinhardtii</i> var. <i>rhomboelliptica</i>
<i>Navicula sanctinaumii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula sanctinaumii</i>	<i>Navicula sanctinaumii</i>
<i>Navicula subhastatula</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula subhastatula</i>	<i>Navicula subhastatula</i>
<i>Navicula submuralis</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Navicula submuralis</i>	<i>Navicula submuralis</i>
<i>Navicula subviridula</i>			None	None	None	None	No data	None	None	MKD	No		<i>Navicula subviridula</i>	<i>Navicula subviridula</i>
<i>Neidium acutum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neidium acutum</i>	<i>Neidium acutum</i>
<i>Neidium cuneatiforme</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neidium cuneatiforme</i>	<i>Neidium cuneatiforme</i>
<i>Neidium majus</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Neidium majus</i>	<i>Neidium majus</i>
<i>Nitzschia balcanica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nitzschia balcanica</i>	<i>Nitzschia balcanica</i>
<i>Nitzschia macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nitzschia macedonica</i>	<i>Nitzschia macedonica</i>
<i>Nitzschia speciosa</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Nitzschia speciosa</i>	<i>Nitzschia speciosa</i>
<i>Nitzschia spinifera</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nitzschia spinifera</i>	<i>Nitzschia spinifera</i>
<i>Oocystis rhomboidea</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Oocystis rhomboidea</i>	<i>Oocystis rhomboidea</i>
<i>Phormidium endolithicum</i> fo. <i>lacustris</i>			None	None	None	None	No data	None	None	MKD	No		<i>Phormidium endolithicum</i> fo. <i>lacustris</i>	<i>Phormidium endolithicum</i> fo. <i>lacustris</i>
<i>Phormidium ercegovici</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Phormidium ercegovici</i>	<i>Phormidium ercegovici</i>
<i>Phormidium gelatinosum</i> fo. <i>ochridana</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Phormidium gelatinosum</i> fo. <i>ochridana</i>	<i>Phormidium gelatinosum</i> fo. <i>ochridana</i>
<i>Phormidium macedonicum</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Phormidium macedonicum</i>	<i>Phormidium macedonicum</i>
<i>Phormidium purpurascens</i> fo. <i>ochridiana</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Phormidium purpurascens</i> fo. <i>ochridiana</i>	<i>Phormidium purpurascens</i> fo. <i>ochridiana</i>
<i>Phormidium undosum</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Phormidium undosum</i>	<i>Phormidium undosum</i>
<i>Placoneis balcanica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis balcanica</i>	<i>Placoneis balcanica</i>



Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Placoneis juriljii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis juriljii</i>	<i>Placoneis juriljii</i>
<i>Placoneis macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis macedonica</i>	<i>Placoneis macedonica</i>
<i>Placoneis ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis ohridana</i>	<i>Placoneis ohridana</i>
<i>Placoneis prespanensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis prespanensis</i>	<i>Placoneis prespanensis</i>
<i>Placoneis pseudabudans</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis pseudabudans</i>	<i>Placoneis pseudabudans</i>
<i>Placoneis signatoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis signatoides</i>	<i>Placoneis signatoides</i>
<i>Placoneis significans</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis significans</i>	<i>Placoneis significans</i>
<i>Placoneis subelegans</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis subelegans</i>	<i>Placoneis subelegans</i>
<i>Placoneis subgastriformis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis subgastriformis</i>	<i>Placoneis subgastriformis</i>
<i>Placoneis tumidula</i>			None	None	None	None	No data	None	None	MKD	No		<i>Placoneis tumidula</i>	<i>Placoneis tumidula</i>
<i>Plectonema spelaeoides</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Plectonema spelaeoides</i>	<i>Plectonema spelaeoides</i>
<i>Prestauroneis tumida</i>			None	None	None	None	No data	None	None	MKD	No		<i>Prestauroneis tumida</i>	<i>Prestauroneis tumida</i>
<i>Pulchella obsita</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pulchella obsita</i>	<i>Pulchella obsita</i>
<i>Puncticulata thienemanni</i>			None	None	None	None	No data	None	None	MKD	No		<i>Puncticulata thienemanni</i>	<i>Puncticulata thienemanni</i>
<i>Reimeria fontinalis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Reimeria fontinalis</i>	<i>Reimeria fontinalis</i>
<i>Rhabdoderma sigmoidea fo. macedonica</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Rhabdoderma sigmoidea fo. macedonica</i>	<i>Rhabdoderma sigmoidea fo. macedonica</i>
<i>Rhoicosphenia macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Rhoicosphenia macedonica</i>	<i>Rhoicosphenia macedonica</i>
<i>Rhoicosphenia tenuis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Rhoicosphenia tenuis</i>	<i>Rhoicosphenia tenuis</i>
<i>Rivularia lapidosa</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Rivularia lapidosa</i>	<i>Rivularia lapidosa</i>
<i>Scoliodiscus echinatus</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Scoliodiscus echinatus</i>	<i>Scoliodiscus echinatus</i>
<i>Scoliodiscus glaber</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Scoliodiscus glaber</i>	<i>Scoliodiscus glaber</i>
<i>Sellaphora bacillioides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sellaphora bacillioides</i>	<i>Sellaphora bacillioides</i>
<i>Sellaphora krsticii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sellaphora krsticii</i>	<i>Sellaphora krsticii</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Convention	Bonn Convention	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Sellaphora macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sellaphora macedonica</i>	<i>Sellaphora macedonica</i>
<i>Sellaphora mutatoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sellaphora mutatoides</i>	<i>Sellaphora mutatoides</i>
<i>Sellaphora ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sellaphora ohridana</i>	<i>Sellaphora ohridana</i>
<i>Sellaphora perbacilloides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sellaphora perbacilloides</i>	<i>Sellaphora perbacilloides</i>
<i>Sellaphora pseudomutatoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sellaphora pseudomutatoides</i>	<i>Sellaphora pseudomutatoides</i>
<i>Sellaphora subpupula</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sellaphora subpupula</i>	<i>Sellaphora subpupula</i>
<i>Spirogyra drilonensis</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Spirogyra drilonensis</i>	<i>Spirogyra drilonensis</i>
<i>Staurastrum brevispina</i> var. <i>prespanse</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Staurastrum brevispina</i> var. <i>prespanse</i>	<i>Staurastrum brevispina</i> var. <i>prespanse</i>
<i>Staurastrum hantzschii</i> var. <i>major</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Staurastrum hantzschii</i> var. <i>major</i>	<i>Staurastrum hantzschii</i> var. <i>major</i>
<i>Staurastrum macedonicum</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Staurastrum macedonicum</i>	<i>Staurastrum macedonicum</i>
<i>Staurastrum ochridense</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Staurastrum ochridense</i>	<i>Staurastrum ochridense</i>
<i>Staurastrum pilealum</i> var. <i>ressenense</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Staurastrum pilealum</i> var. <i>ressenense</i>	<i>Staurastrum pilealum</i> var. <i>ressenense</i>
<i>Staurastrum unguiferum</i> var. <i>prespanese</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Staurastrum unguiferum</i> var. <i>prespanese</i>	<i>Staurastrum unguiferum</i> var. <i>prespanese</i>
<i>Stauroneis lychnidis</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Stauroneis lychnidis</i>	<i>Stauroneis lychnidis</i>
<i>Stauroneis palustris</i>			None	None	None	None	No data	None	None	MKD	No		<i>Stauroneis palustris</i>	<i>Stauroneis palustris</i>
<i>Stausirella lata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Stausirella lata</i>	<i>Stausirella lata</i>
<i>Stausirella pulchella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Stausirella pulchella</i>	<i>Stausirella pulchella</i>
<i>Surirella costata</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Surirella costata</i>	<i>Surirella costata</i>
<i>Surirella helisela</i>			None	None	None	None	No data	None	None	MKD	No		<i>Surirella helisela</i>	<i>Surirella helisela</i>
<i>Surirella iconella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Surirella iconella</i>	<i>Surirella iconella</i>
<i>Surirella imbuta</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Surirella imbuta</i>	<i>Surirella imbuta</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Surirella lineopunctata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Surirella lineopunctata</i>	<i>Surirella lineopunctata</i>
<i>Surirella rotunda</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Surirella rotunda</i>	<i>Surirella rotunda</i>
<b>FUNGI (Fungi)</b>														
<i>Agaricus macrosporus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Agaricus macrosporus</i>	<i>Agaricus macrosporus</i>
<i>Amanita caesarea</i>		Bulka, Jajcharka, Carska Gaba	None	None	None	None	No data	None	None	No	Yes		<i>Amanita caesarea</i>	<i>Amanita caesarea</i>
<i>Amanita vitadinii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Amanita vitadinii</i>	<i>Amanita vitadinii</i>
<i>Amylostereum areolatum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Amylostereum areolatum</i>	<i>Amylostereum areolatum</i>
<i>Antrodia juniperina</i>			None	None	None	None	No data	None	None	No	Yes		<i>Antrodia juniperina</i>	<i>Antrodia juniperina</i>
<i>Apoxona nitida</i>			None	None	None	None	No data	None	None	No	Yes		<i>Apoxona nitida</i>	<i>Apoxona nitida</i>
<i>Armillariella tabescens</i>		Gaba Grmushka	None	None	None	None	No data	None	None	No	Yes		<i>Armillariella tabescens</i>	<i>Armillariella tabescens</i>
<i>Basidioidendron caesiocinereum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Basidioidendron caesiocinereum</i>	<i>Basidioidendron caesiocinereum</i>
<i>Battarea phalloides</i>		Faloidna Batarea	None	None	None	None	No data	None	None	No	Yes	<i>Battarea phalloides</i>		<i>Battarea phalloides</i>
<i>Boletus dupainii</i>		Dupainiev Vrganj	None	None	II*	None	No data	None	None	No	No	<i>Boletus dupainii</i>		<i>Boletus dupainii</i>
<i>Boletus aereus</i>		Crn Vrganj	None	None	None	None	No data	None	None	No	Yes		<i>Boletus aereus</i>	<i>Boletus aereus</i>
<i>Boletus fechtneri</i>	Pale Bolete	Feshterov Vrganj	None	None	None	None	No data	None	None	No	Yes		<i>Boletus fechtneri</i>	<i>Boletus fechtneri</i>
<i>Boletus pulverulentus</i>	Inkstain Bolete		None	None	None	None	No data	None	None	No	Yes		<i>Boletus pulverulentus</i>	<i>Boletus pulverulentus</i>
<i>Boletus regius</i>	Royal Bolete	Kralski Vrganj	None	None	None	None	No data	None	None	No	Yes		<i>Boletus regius</i>	<i>Boletus regius</i>
<i>Boletus rhodoxanthus</i>		Zoltonog vrganj	None	None	None	None	No data	None	None	No	Yes		<i>Boletus rhodoxanthus</i>	<i>Boletus rhodoxanthus</i>
<i>Boletus satanas</i>	Devil's Bolete	Djavolski Vrganj	None	None	None	None	No data	None	None	No	Yes		<i>Boletus satanas</i> Lenz	<i>Boletus satanas</i> Lenz
<i>Chroogomphus helveticus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Chroogomphus helveticus</i>	<i>Chroogomphus helveticus</i>
<i>Clathrus ruber</i>	Red Cage	Veshterkino Srce	None	None	None	None	No data	None	None	No	Yes		<i>Clathrus ruber</i>	<i>Clathrus ruber</i>
<i>Craterellus cornucopioides</i>	Horn of Plenty	Crna Truba	None	None	None	None	No data	None	None	No	Yes		<i>Craterellus cornucopioides</i>	<i>Craterellus cornucopioides</i>
<i>Creolophus cirrhatus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Creolophus cirrhatus</i>	<i>Creolophus cirrhatus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Dichomitus albidofuscus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Dichomitus albidofuscus</i>	<i>Dichomitus albidofuscus</i>
<i>Diplomitoporus flavescens</i>			None	None	None	None	No data	None	None	No	Yes		<i>Diplomitoporus flavescens</i>	<i>Diplomitoporus flavescens</i>
<i>Exidia pithya</i>			None	None	None	None	No data	None	None	No	Yes		<i>Exidia pithya</i>	<i>Exidia pithya</i>
<i>Gastrum minimum</i>		Sitna Dzevdichka	None	None	None	None	No data	None	None	No	Yes		<i>Gestrum minimum</i>	<i>Gestrum minimum</i>
<i>Gloeocystidiellum ochraceum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Gloeocystidiellum ochraceum</i>	<i>Gloeocystidiellum ochraceum</i>
<i>Gloeoporus dichrous</i>			None	None	None	None	No data	None	None	No	Yes		<i>Gloeoporus dichrous</i>	<i>Gloeoporus dichrous</i>
<i>Heridium erinaceus</i>			None	None	II*	None	No data	None	None	No	Yes	<i>Heridium erinaceus</i>		<i>Heridium erinaceus</i>
<i>Heterochaetella dubia</i>			None	None	None	None	No data	None	None	No	Yes		<i>Heterochaetella dubia</i>	<i>Heterochaetella dubia</i>
<i>Hirneola auricula judae</i>		Judino Uvo	None	None	None	None	No data	None	None	No	Yes		<i>Hirneola auricula judae</i>	<i>Hirneola auricula judae</i>
<i>Hygrocybe reai</i>			None	None	None	None	No data	None	None	No	Yes		<i>Hygrocybe reai</i>	<i>Hygrocybe reai</i>
<i>Hygrophorus marzuolus</i>		Martovka	None	None	None	None	No data	None	None	No	Yes		<i>Hygrophorus marzuolus</i>	<i>Hygrophorus marzuolus</i>
<i>Hyphoderma pallidum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Hyphoderma pallidum</i>	<i>Hyphoderma pallidum</i>
<i>Inonotus tamaricis</i>			None	None	None	None	No data	None	None	No	Yes		<i>Inonotus tamaricis</i>	<i>Inonotus tamaricis</i>
<i>Lachnellula suecica</i>			None	None	None	None	No data	None	None	No	Yes		<i>Lachnellula suecica</i>	<i>Lachnellula suecica</i>
<i>Langermannia gigantea</i>	Giant Puffball		None	None	None	None	No data	None	None	No	Yes		<i>Langermannia gigantea</i>	<i>Langermannia gigantea</i>
<i>Leptosporomyces galzinii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Leptosporomyces galzinii</i>	<i>Leptosporomyces galzinii</i>
<i>Lindtneria chordulata</i>			None	None	None	None	No data	None	None	No	Yes		<i>Lindtneria chordulata</i>	<i>Lindtneria chordulata</i>
<i>Macrolepiota procera</i>	Parasol	Soncharka, Srska Pechurka	None	None	None	None	No data	None	None	No	Yes		<i>Macrolepiota procera</i>	<i>Macrolepiota procera</i>
<i>Metulodontia nivea</i>			None	None	None	None	No data	None	None	No	Yes		<i>Metulodontia nivea</i>	<i>Metulodontia nivea</i>
<i>Mutinus caninus</i>	Dog Stinkhorn	Kucheshki Besramnik	None	None	None	None	No data	None	None	No	Yes		<i>Mutinus caninus</i>	<i>Mutinus caninus</i>
<i>Mycoacia nothofagi</i>			None	None	None	None	No data	None	None	No	Yes		<i>Mycoacia nothofagi</i>	<i>Mycoacia nothofagi</i>
<i>Mycoaciella bispora</i>			None	None	None	None	No data	None	None	No	Yes		<i>Mycoaciella bispora</i>	<i>Mycoaciella bispora</i>
<i>Myriostoma coliforme</i>	Pepper Pot	Dupchesta Dzevdichka	None	None	II*	None	No data	None	None	No	Yes	<i>Myriostoma coliforme</i>		<i>Myriostoma coliforme</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Parmastomyces krawtzevianus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Parmastomyces krawtzevianus</i>	<i>Parmastomyces krawtzevianus</i>
<i>Paxillus atrotomentosus</i>	Velvet Rollrim	Crnonoga Svivka	None	None	None	None	No data	None	None	No	Yes		<i>Paxillus atrotomentosus</i>	<i>Paxillus atrotomentosus</i>
<i>Peniophora junipericola</i>			None	None	None	None	No data	None	None	No	Yes		<i>Peniophora junipericola</i>	<i>Peniophora junipericola</i>
<i>Peniophora tamaricicola</i>			None	None	None	None	No data	None	None	No	Yes		<i>Peniophora tamaricicola</i>	<i>Peniophora tamaricicola</i>
<i>Perenniporia narymica</i>			None	None	None	None	No data	None	None	No	Yes		<i>Perenniporia narymica</i>	<i>Perenniporia narymica</i>
<i>Phanerochaete martelliana</i>			None	None	None	None	No data	None	None	No	Yes		<i>Phanerochaete martelliana</i>	<i>Phanerochaete martelliana</i>
<i>Phellinus rimosus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Phellinus rimosus</i>	<i>Phellinus rimosus</i>
<i>Phellinus robustus</i>	Robust Bracket		None	None	None	None	No data	None	None	No	Yes		<i>Phellinus robustus</i>	<i>Phellinus robustus</i>
<i>Phlebia griseo-flavescens</i>			None	None	None	None	No data	None	None	No	Yes		<i>Phlebia griseo-flavescens</i>	<i>Phlebia griseo-flavescens</i>
<i>Phylloporus pelletieri</i>			None	None	II*	None	No data	None	None	No	No	<i>Phylloporus pelletieri</i>		<i>Phylloporus pelletieri</i>
<i>Pleurocybella porigens</i>			None	None	None	None	No data	None	None	No	Yes		<i>Pleurocybella porigens</i>	<i>Pleurocybella porigens</i>
<i>Pleurotus dryinus</i>	Veiled Oyster		None	None	None	None	No data	None	None	No	Yes		<i>Pleurotus dryinus</i>	<i>Pleurotus dryinus</i>
<i>Poronia punctata</i>	Nail Fungus	Magareshka tochkarica	None	None	None	None	No data	None	None	No	Yes		<i>Poronia punctata</i>	<i>Poronia punctata</i>
<i>Porostereum spadiceum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Porostereum spadiceum</i>	<i>Porostereum spadiceum</i>
<i>Pyrofomes demidoffii</i>		Foin Trat	None	None	None	None	No data	None	None	No	Yes		<i>Pyrofomes demidoffii</i>	<i>Pyrofomes demidoffii</i>
<i>Rigidoporus undatus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Rigidoporus undatus</i>	<i>Rigidoporus undatus</i>
<i>Sarcodon imbricatus</i>	Scaly Tooth , Tiled Hydnum	Srnenka	None	None	None	None	No data	None	None	No	Yes		<i>Sarcodon imbricatus</i>	<i>Sarcodon imbricatus</i>
<i>Sarcosphaera coronaria</i>	Violet Crowncup		None	None	II*	None	No data	None	None	No	No	<i>Sarcosphaera coronaria</i>		<i>Sarcosphaera coronaria</i>
<i>Sarcoporia salmonicolor</i>			None	None	None	None	No data	None	None	No	Yes		<i>Sarcoporia salmonicolor</i>	<i>Sarcoporia salmonicolor</i>
<i>Skeletocutis odora</i>			None	None	II*	None	No data	None	None	No	No	<i>Skeletocutis odora</i>		<i>Skeletocutis odora</i>
<i>Steccherinum litschaueri</i>			None	None	None	None	No data	None	None	No	Yes		<i>Steccherinum litschaueri</i>	<i>Steccherinum litschaueri</i>
<i>Suillus sibiricus</i>			None	None	II*	None	No data	None	None	No	Yes	<i>Suillus sibiricus</i>		<i>Suillus sibiricus</i>
<i>Trametes Ijubarskii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Trametes Ijubarskii</i>	<i>Trametes Ijubarskii</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Tremella foliacea</i>	Brown Witch's Butter		None	None	None	None	No data	None	None	No	Yes		<i>Tremella foliacea</i>	<i>Tremella foliacea</i>
<i>Tricholoma colossus</i>	Giant Knight	Golema Kružnoliska	None	None	II*	None	No data	None	None	No	No	<i>Tricholoma colossus</i>		<i>Tricholoma colossus</i>
<i>Tulostoma brumale</i>	Winter Stalkball		None	None	None	None	No data	None	None	No	Yes		<i>Tulostoma brumale</i>	<i>Tulostoma brumale</i>
<i>Tulostoma melanocyclus</i>	Scaly Stalkball		None	None	None	None	No data	None	None	No	Yes		<i>Tulostoma melanocyclus</i>	<i>Tulostoma melanocyclus</i>
<i>Utathobasidium ochraceum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Utathobasidium ochraceum</i>	<i>Utathobasidium ochraceum</i>
<i>Volvariella bombycina</i>	Silky Rosegill	Svilenesta Tobolcharka	None	None	None	None	No data	None	None	No	Yes		<i>Volvariella bombycina</i>	<i>Volvariella bombycina</i>
<b>LICHENS, LICHENOID FUNGI (Lichenes)</b>														
<i>Evernia divaricata</i>	Mountain Oakmoss Lichen		None	None	None	None	No data	None	None	No	Yes		<i>Evernia divaricata</i>	<i>Evernia divaricata</i>
<i>Parmelina exasperatula</i>			None	None	None	None	No data	None	None	No	Yes		<i>Parmelina exasperatula</i>	<i>Parmelina exasperatula</i>
<i>Parmelina omphaloides</i>			None	None	None	None	No data	None	None	No	Yes		<i>Parmelina omphaloides</i>	<i>Parmelina omphaloides</i>
<i>Parmelina pastillifera</i>			None	None	None	None	No data	None	None	No	Yes		<i>Parmelina pastillifera</i>	<i>Parmelina pastillifera</i>
<i>Parmelina soorediata</i>			None	None	None	None	No data	None	None	No	Yes		<i>Parmelina soorediata</i>	<i>Parmelina soorediata</i>
<i>Peltigera venosa</i>	Fan Lichen; Felt Lichen		None	None	None	None	No data	None	None	No	Yes		<i>Peltigera venosa</i>	<i>Peltigera venosa</i>
<i>Pertusaria coccodes</i>			None	None	None	None	No data	None	None	No	Yes		<i>Pertusaria coccodes</i>	<i>Pertusaria coccodes</i>
<i>Ramalia carpatica</i>			None	None	None	None	No data	None	None	No	Yes		<i>Ramalia carpatica</i>	<i>Ramalia carpatica</i>
<i>Ramalia polymorpha</i>			None	None	None	None	No data	None	None	No	Yes		<i>Ramalia polymorpha</i>	<i>Ramalia polymorpha</i>
<i>Staurothele clopimoides</i>			None	None	None	None	No data	None	None	No	Yes		<i>Staurothele clopimoides</i>	<i>Staurothele clopimoides</i>
<i>Usnea carpatica</i>			None	None	None	None	No data	None	None	No	Yes		<i>Usnia carpatica</i>	<i>Usnia carpatica</i>
<i>Usnea caucasica</i>			None	None	None	None	No data	None	None	No	Yes		<i>Usnia caucasica</i>	<i>Usnia caucasica</i>
<b>MOSESSES (Bryophyta)</b>														
<i>Andraea rupestris</i>			None	None	None	None	No data	None	None	No	Yes		<i>Andraea rupestris</i>	<i>Andraea rupestris</i>
<i>Anthroceros punctatus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Anthroceros punctatus</i>	<i>Anthroceros punctatus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Buxbaumia viridis</i>	Green Shield-Moss		None	II/IV	I	None	No data	None	None	No	Yes		<i>Buxbaumia viridis</i>	<i>Buxbaumia viridis</i>
<i>Catoscopium nigratum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Catoscopium nigratum</i>	<i>Catoscopium nigratum</i>
<i>Leucobryum glaucum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Leucobryum glaucum</i>	<i>Leucobryum glaucum</i>
<i>Mannia triandra</i>			None	None	I	None	No data	None	None	No	No			
<i>Melichopheria paradoxa</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Melichopheria paradoxa</i>		<i>Melichopheria paradoxa</i>
<i>Orthotrichum insidiosum</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Orthotrichum insidiosum</i>		<i>Orthotrichum insidiosum</i>
<i>Rhodobryum roseum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Rhodobryum roseum</i>	<i>Rhodobryum roseum</i>
<b>FERNS (Pteridophyta)</b>														
<i>Asplenium macedonicum</i>			None	None	None	None	No data	None	None	Markovi Kuli	Yes	<i>Asplenium macedonicum</i>		<i>Asplenium macedonicum</i>
<i>Botrychium lunaria</i>			None	None	None	None	No data	None	None	No	No			
<i>Isoetes phrygia</i>			None	None	None	None	No data	None	None	No	Yes		<i>Isoetes phrygia</i>	<i>Isoetes phrygia</i>
<i>Marsilea quadrifolia</i>	Four Leaf Clover	Chetvorolisna Marsilea	None	II/IV	I	None	No data	None	None	No	No		<i>Marsilea quadrifolia</i>	<i>Marsilea quadrifolia</i>
<i>Ophioglossum vulgatum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Ophioglossum vulgatum</i>	<i>Ophioglossum vulgatum</i>
<i>Osmunda regalis</i>	Royal Fern	Kralska Paprat	None	None	None	None	No data	None	None	No	Yes		<i>Osmunda regalis</i>	<i>Osmunda regalis</i>
<b>PLANTS (Plantae)</b>														
<i>Adonis vernalis</i>	Yellow Adonis	Proleten gorocvet	None	None	None	None	No data	II	B	No	Yes	<i>Adonis vernalis</i>		<i>Adonis vernalis</i>
<i>Aira scoparia</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aira scoparia</i>	<i>Aira scoparia</i>
<i>Ajuga piscoi</i>			None	None	None	None	No data	None	None	No	Yes		<i>Ajuga piscoi</i>	<i>Ajuga piscoi</i>
<i>Alchemilla peristerica</i>		Pelisterska nebesna rosa	None	None	None	None	No data	None	None	MKD	No		<i>Alchemilla peristerica</i>	<i>Alchemilla peristerica</i>
<i>Aldrovanda vesiculosa</i>	Waterwheel Plant	Aldrovanda	None	II/IV	I	None	No data	None	None	No	No		<i>Aldrovanda vesiculosa</i>	<i>Aldrovanda vesiculosa</i>
<i>Alkanna noneiformis</i>			None	None	None	None	No data	None	None	MKD	Yes		<i>Alkanna noneiformis</i>	<i>Alkanna noneiformis</i>
<i>Alkanna pulmonaria</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Alkanna pulmonaria</i>		<i>Alkanna pulmonaria</i>
<i>Alkanna sibirnyi</i>			None	None	None	None	No data	None	None	No	Yes		<i>Alkanna sibirnyi</i>	<i>Alkanna sibirnyi</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Alopecurus creticus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Alopecurus creticus</i>	<i>Alopecurus creticus</i>
<i>Alyssum bargalense</i>			None	None	None	None	No data	None	None	MKD	No		<i>Alyssum bargalense</i>	<i>Alyssum bargalense</i>
<i>Alyssum debarensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Alyssum debarensis</i>	<i>Alyssum debarensis</i>
<i>Alyssum doerfleri</i>			None	None	None	None	No data	None	None	No	Yes		<i>Alyssum doerfleri</i>	<i>Alyssum doerfleri</i>
<i>Alyssum gevgelicensis</i> , f. <i>multiradiata</i> , f. <i>gevgelicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Alyssum gevgelicensis</i> , f. <i>multiradiata</i> , f. <i>gevgelicensis</i>	<i>Alyssum gevgelicensis</i> , f. <i>multiradiata</i> , f. <i>gevgelicensis</i>
<i>Alyssum kavadarcensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Alyssum kavadarcensis</i>	<i>Alyssum kavadarcensis</i>
<i>Alyssum serpentinum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Alyssum serpentinum</i>	<i>Alyssum serpentinum</i>
<i>Alyssum skopjensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Alyssum skopjensis</i>	<i>Alyssum skopjensis</i>
<i>Anchusa serpentinicola</i>			None	None	None	None	No data	None	None	No	Yes		<i>Anchusa serpentinicola</i>	<i>Anchusa serpentinicola</i>
<i>Angelica palustris</i>	Marsh Angelica	Blatna Angelika	None	II/IV	I	None	No data	None	None	No	No			
<i>Anthemis meteorica</i>			None	None	None	None	No data	None	None	No	Yes		<i>Anthemis meteorica</i>	<i>Anthemis meteorica</i>
<i>Anthoxanthum pauciflorum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Anthoxanthum pauciflorum</i>	<i>Anthoxanthum pauciflorum</i>
<i>Armeria vandasii</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Armeria vandasii</i>		<i>Armeria vandasii</i>
<i>Astragalus baldacii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Astragalus baldacii</i>	<i>Astragalus baldacii</i>
<i>Astragalus cernjavskii</i>		Chernjavskiev Kozinec	None	None	None	None	No data	None	None	Orlovo Brdo	Yes	<i>Astragalus cernjavskii</i>		<i>Astragalus cernjavskii</i>
<i>Astragalus gracaniinii</i>		Grachaninov Kozinec	None	None	None	None	No data	None	None	MKD	No		<i>Astragalus gracaniinii</i>	<i>Astragalus gracaniinii</i>
<i>Astragalus mariovoensis</i>		Mariovski Kozinec	None	None	None	None	No data	None	None	MKD	No		<i>Astragalus mariovoensis</i>	<i>Astragalus mariovoensis</i>
<i>Astragalus physocalyx</i>			None	None	I	None	No data	None	None	No	Yes	<i>Astragalus physocalyx</i>		<i>Astragalus physocalyx</i>
<i>Aubrieta tessala</i>			None	None	None	None	No data	None	None	No	Yes		<i>Aubrieta tessala</i>	<i>Aubrieta tessala</i>
<i>Beckmannia eruciformis</i>	Sloughgrass		None	None	None	None	No data	None	None	No	Yes		<i>Beckmannia eruciformis</i>	<i>Beckmannia eruciformis</i>
<i>Bupleurum mayeri</i>			None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Bupleurum mayeri</i>	<i>Bupleurum mayeri</i>
<i>Camphorosma monspeliaca</i>			None	None	None	None	No data	None	None	No	Yes		<i>Camphorosma monspeliaca</i>	<i>Camphorosma monspeliaca</i>



Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Carex elata</i>	Tufted Sedge		None	None	None	None	No data	None	None	No	Yes		<i>Carex elata</i>	<i>Carex elata</i>
<i>Centaurea cylindrocephala</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea cylindrocephala</i>	<i>Centaurea cylindrocephala</i>
<i>Centaurea demirkapiensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea demirkapiensis</i>	<i>Centaurea demirkapiensis</i>
<i>Centaurea formanekii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea formanekii</i>	<i>Centaurea formanekii</i>
<i>Centaurea galicicae</i>			None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Centaurea galicicae</i>	<i>Centaurea galicicae</i>
<i>Centaurea grbavacensis</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Centaurea grbavacensis</i>		<i>Centaurea grbavacensis</i>
<i>Centaurea kavadarensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea kavadarensis</i>	<i>Centaurea kavadarensis</i>
<i>Centaurea kosaninii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Centaurea kosaninii</i>	<i>Centaurea kosaninii</i>
<i>Centaurea kozjakensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea kozjakensis</i>	<i>Centaurea kozjakensis</i>
<i>Centaurea leucomalla</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea leucomalla</i>	<i>Centaurea leucomalla</i>
<i>Centaurea marmorea</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea marmorea</i>	<i>Centaurea marmorea</i>
<i>Centaurea rufidula</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Centaurea rufidula</i>		<i>Centaurea rufidula</i>
<i>Centaurea skopjensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea skopjensis</i>	<i>Centaurea skopjensis</i>
<i>Centaurea soskae</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Centaurea soskae</i>		<i>Centaurea soskae</i>
<i>Centaurea tomorosii</i>			None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Centaurea tomorosii</i>	<i>Centaurea tomorosii</i>
<i>Centaurea trescana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea trescana</i>	<i>Centaurea trescana</i>
<i>Centaurea wagenitzii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Centaurea wagenitzii</i>	<i>Centaurea wagenitzii</i>
<i>Centaurea wettsteinii</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Centaurea wettsteinii</i>		<i>Centaurea wettsteinii</i>
<i>Cladium mariscus</i>	Sedge		None	None	None	None	No data	None	None	No	Yes		<i>Cladium mariscus</i>	<i>Cladium mariscus</i>
<i>Colchicum macedonicum</i>		Makedonski Mrazovec	None	None	None	None	No data	None	None	Jakupica Mt.	Yes	<i>Colchicum macedonicum</i>		<i>Colchicum macedonicum</i>
<i>Colchicum piepeianum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Colchicum piepeianum</i>	<i>Colchicum piepeianum</i>
<i>Corydalis zetterlandii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Corydalis zetterlandii</i>	<i>Corydalis zetterlandii</i>
<i>Crataegus incana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Crataegus incana</i>	<i>Crataegus incana</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Crataegus sericeus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Crataegus sericeus</i>	<i>Crataegus sericeus</i>
<i>Crocus cvijici</i>		Cvijicheva Kachunka	None	None	None	None	No data	None	None	No	Yes	<i>Crocus cvijici</i>		<i>Crocus cvijici</i>
<i>Crocus pelistericus</i>		Pelisterka Kachunka	None	None	None	None	No data	None	None	No	Yes	<i>Crocus pelistericus</i>		<i>Crocus pelistericus</i>
<i>Crypsis aculeata</i>			None	None	None	None	No data	None	None	No	Yes	<i>Crypsis aculeata</i>		<i>Crypsis aculeata</i>
<i>Dianthus galicicae</i>		Galichiski Karanfil	None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Dianthus galicicae</i>	<i>Dianthus galicicae</i>
<i>Dianthus jablanicensis</i>		Jablanichki Karanfil	None	None	None	None	No data	None	None	MKD	No		<i>Dianthus jablanicensis</i>	<i>Dianthus jablanicensis</i>
<i>Dianthus jacupicensis</i>		Jakupichki Karanfil	None	None	None	None	No data	None	None	MKD	No		<i>Dianthus jacupicensis</i>	<i>Dianthus jacupicensis</i>
<i>Dianthus jugoslavicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dianthus jugoslavicus</i>	<i>Dianthus jugoslavicus</i>
<i>Dianthus kajmaktzalanicus</i>		Kajmakchelanski Karanfil	None	None	None	None	No data	None	None	MKD	No		<i>Dianthus kajmaktzalanicus</i>	<i>Dianthus kajmaktzalanicus</i>
<i>Dianthus kapinensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dianthus kapinensis</i>	<i>Dianthus kapinensis</i>
<i>Dianthus macedonicus</i>		Makedonski Karanfil	None	None	None	None	No data	None	None	MKD	No		<i>Dianthus macedonicus</i>	<i>Dianthus macedonicus</i>
<i>Dianthus myrtinervius</i>			None	None	None	None	No data	None	None	No	Yes		<i>Dianthus myrtinervius</i>	<i>Dianthus myrtinervius</i>
<i>Dianthus ochridanus</i>		Ohridski Karanfil	None	None	None	None	No data	None	None	MKD	No		<i>Dianthus ochridanus</i>	<i>Dianthus ochridanus</i>
<i>Dianthus prilepensis</i>		Prilepski Karanfil	None	None	None	None	No data	None	None	MKD	No		<i>Dianthus prilepensis</i>	<i>Dianthus prilepensis</i>
<i>Dianthus skopjensis</i>		Skopski Karanfil	None	None	None	None	No data	None	None	MKD	No		<i>Dianthus skopjensis</i>	<i>Dianthus skopjensis</i>
<i>Dianthus vodnensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dianthus vodnensis</i>	<i>Dianthus vodnensis</i>
<i>Drosera rotundifolia</i>	Sundew		None	None	None	None	No data	None	None	No	Yes	<i>Drosera rotundifolia</i>		<i>Drosera rotundifolia</i>
<i>Echium russicum</i>	Viper's Bugloss	Zmijoglavka	None	II/IV	None	None	No data	None	None	No	No			
<i>Edrayanthus horvatii</i>			None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Edrayanthus horvatii</i>	<i>Edrayanthus horvatii</i>
<i>Erodium guicciardii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Erodium guicciardii</i>	<i>Erodium guicciardii</i>
<i>Eryngium serbicum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Eryngium serbicum</i>	<i>Eryngium serbicum</i>
<i>Ferulago macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ferulago macedonica</i>	<i>Ferulago macedonica</i>
<i>Festuca galicicae</i>			None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Festuca galicicae</i>	<i>Festuca galicicae</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Fritillaria graeca</i>			None	None	I	None	No data	None	None	No	No			
<i>Fritillaria gussichiae</i>			None	IV	I	None	No data	None	None	No	Yes		<i>Fritillaria gussichiae</i>	<i>Fritillaria gussichiae</i>
<i>Fritillaria macedonica</i>			None	None	None	None	No data	None	None	No	Yes		<i>Fritillaria macedonica</i>	<i>Fritillaria macedonica</i>
<i>Galium rhodopeum</i>			None	None	I	None	No data	None	None	No	No			
<i>Genista fukarekiana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Genista fukarekiana</i>	<i>Genista fukarekiana</i>
<i>Genista nissana</i>			None	None	None	None	No data	None	None	No	Yes		<i>Genista nissana</i>	<i>Genista nissana</i>
<i>Gentiana lutea</i> ssp. <i>symphyandra</i>	Great Yellow Gentian	Lincura	None	None	None	None	No data	None	None	No	Yes	<i>Gentiana lutea</i> ssp. <i>symphyandra</i> ***		<i>Gentiana lutea</i> ssp. <i>symphyandra</i>
<i>Gentiana punctata</i>		Tochkesta Lincura	None	None	None	None	No data	None	None	No	No	<i>Gentiana punctata</i> ***		<i>Gentiana punctata</i>
<i>Gladiolus palustris</i>	Marsh Gladiolus	Blatna Gladiola	None	II/IV	None	None	No data	None	None	No	Yes			
<i>Glyceria maxima</i>	Reed Meadow Grass		None	None	None	None	No data	None	None	No	Yes		<i>Glyceria maxima</i>	<i>Glyceria maxima</i>
<i>Gypsophila macedonica</i>			None	None	None	None	No data	None	None	No	Yes		<i>Gypsophila macedonica</i>	<i>Gypsophila macedonica</i>
<i>Hedysarum macedonicum</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Hedysarum macedonicum</i>		<i>Hedysarum macedonicum</i>
<i>Helichrysum zivojinii</i>			None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Helichrysum zivojinii</i>	<i>Helichrysum zivojinii</i>
<i>Heptaptera macedonica</i>			None	None	None	None	No data	None	None	Ljubash	Yes	<i>Heptaptera macedonica</i>		<i>Heptaptera macedonica</i>
<i>Hesperis macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Hesperis macedonica</i>	<i>Hesperis macedonica</i>
<i>Hypericum dimonieii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Hypericum dimonieii</i>	<i>Hypericum dimonieii</i>
<i>Jurinea taygetea</i>			None	None	None	None	No data	None	None	No	Yes		<i>Jurinea taygetea</i>	<i>Jurinea taygetea</i>
<i>Knautia caroli-rechingeri</i>			None	None	None	None	No data	None	None	Alshar	Yes	<i>Knautia caroli-rechingeri</i>		<i>Knautia caroli-rechingeri</i>
<i>Laserpitium ochridanum</i>			None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Laserpitium ochridanum</i>	<i>Laserpitium ochridanum</i>
<i>Lindernia procumbens</i>			None	IV	I	None	No data	None	None	No	No			
<i>Linum elegans</i>			None	None	None	None	No data	None	None	No	Yes		<i>Linum elegans</i>	<i>Linum elegans</i>
<i>Listera cordata</i>	Heart-leaved Twayblade		None	None	None	None	No data	II	B	No	Yes		<i>Listera cordata</i>	<i>Listera cordata</i>
<i>Malus florentina</i>			None	None	None	None	No data	None	None	No	Yes		<i>Malus florentina</i>	<i>Malus florentina</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Melampyrum heracleoticum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Melampyrum heracleoticum</i>	<i>Melampyrum heracleoticum</i>
<i>Merendera sobolifera</i>			None	None	None	None	No data	None	None	No	Yes		<i>Merendera sobolifera</i>	<i>Merendera sobolifera</i>
<i>Micromeria kosaninii</i>			None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Micromeria kosaninii</i>	<i>Micromeria kosaninii</i>
<i>Minuartia baldaccii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Minuartia baldaccii</i>	<i>Minuartia baldaccii</i>
<i>Moehringia minutiflora</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Moehringia minutiflora</i>		<i>Moehringia minutiflora</i>
<i>Narthecium scardicum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Narthecium scardicum</i>	<i>Narthecium scardicum</i>
<i>Nepeta ernesti-mayeri</i>			None	None	None	None	No data	None	None	Galichica Mt.	Yes	<i>Nepeta ernesti-mayeri</i>		<i>Nepeta ernesti-mayeri</i>
<i>Nepeta macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nepeta macedonica</i>	<i>Nepeta macedonica</i>
<i>Nymphaea alba</i>	White Water Lily	Lotos, Bel lopen	None	None	None	None	No data	None	None	No	Yes		<i>Nymphaea alba</i>	<i>Nymphaea alba</i>
<i>Onobrychis degenii</i>			None	None	None	None	No data	None	None	Alshar	Yes	<i>Onobrychis degenii</i>		<i>Onobrychis degenii</i>
<i>Oxytropis purpurea</i>			None	None	None	None	No data	None	None	No	Yes		<i>Oxytropis purpurea</i>	<i>Oxytropis purpurea</i>
<i>Pedicularis ferdinandii</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Pedicularis ferdinandii</i>		<i>Pedicularis ferdinandii</i>
<i>Pedicularis limnogenae</i>			None	None	None	None	No data	None	None	No	Yes		<i>Pedicularis limnogenae</i>	<i>Pedicularis limnogenae</i>
<i>Pinus heldreichii</i>		Munika	None	None	None	None	LC	None	None	No	Yes		<i>Pinus heldreichii</i>	<i>Pinus heldreichii</i>
<i>Pinus peuce</i>		Molika	None	None	None	None	NT	None	None	No	Yes		<i>Pinus peuce</i>	<i>Pinus peuce</i>
<i>Potentilla doerfleri</i>			None	None	None	None	No data	None	None	No	Yes	<i>Potentilla doerfleri</i>		<i>Potentilla doerfleri</i>
<i>Potentilla macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potentilla macedonica</i>	<i>Potentilla macedonica</i>
<i>Potentilla pletvarensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potentilla pletvarensis</i>	<i>Potentilla pletvarensis</i>
<i>Potentilla suskalovicii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potentilla suskalovicii</i>	<i>Potentilla suskalovicii</i>
<i>Potentilla topolkae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potentilla topolkae</i>	<i>Potentilla topolkae</i>
<i>Potentilla tridentula</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potentilla tridentula</i>	<i>Potentilla tridentula</i>
<i>Potentilla velenovskyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potentilla velenovskyi</i>	<i>Potentilla velenovskyi</i>
<i>Potentilla visianii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Potentilla visianii</i>	<i>Potentilla visianii</i>
<i>Puccinellia festuciformis</i> subsp. <i>convoluta</i>			None	None	None	None	No data	None	None	No	Yes		<i>Puccinellia festuciformis</i> subsp. <i>convoluta</i>	<i>Puccinellia festuciformis</i> subsp. <i>convoluta</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Ramonda nathaliae</i>		Natalieva Ramonda	None	None	None	None	No data	None	None	No	Yes		<i>Ramonda nathaliae</i>	<i>Ramonda nathaliae</i>
<i>Ramonda serbica</i>	Serbian Phoenix Flower	Balkanska Ramonda	None	IV	I	None	No data	None	None	No	Yes		<i>Ramonda serbica</i>	<i>Ramonda serbica</i>
<i>Ranunculus cacuminis</i>			None	None	None	None	No data	None	None	No	Yes		<i>Ranunculus cacuminis</i>	<i>Ranunculus cacuminis</i>
<i>Ranunculus degeni</i>			None	None	None	None	No data	None	None	No	Yes	<i>Ranunculus degeni</i>		<i>Ranunculus degeni</i>
<i>Ranunculus lingua</i>	Spearwort		None	None	None	None	No data	None	None	No	Yes	<i>Ranunculus lingua</i>		<i>Ranunculus lingua</i>
<i>Ranunculus wettsteinii</i>			None	None	None	None	No data	None	None	No	No			
<i>Rindera graeca</i>			None	None	None	None	No data	None	None	No	Yes		<i>Rindera graeca</i>	<i>Rindera graeca</i>
<i>Rumex hydrolapatum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Rumex hydrolapatum</i>	<i>Rumex hydrolapatum</i>
<i>Salvia jurisicii</i>		Jurishicheva Zhalfija	None	None	None	None	No data	None	None	Bogoslovec, Ovche Pole	Yes	<i>Salvia jurisicii</i>		<i>Salvia jurisicii</i>
<i>Salvia officinalis</i>	Common Sage, Garden Sage	Obichna zhalfija	None	None	None	None	No data	None	None	No	Yes		<i>Salvia officinalis</i>	<i>Salvia officinalis</i>
<i>Salvinia natans</i>	Salvinia, Water Fern	Plivachka	None	None	I	None	No data	None	None	No	Yes		<i>Salvinia natans</i>	<i>Salvinia natans</i>
<i>Sambucus deborensis</i>		Debarski Bozel	None	None	None	None	No data	None	None	Debar	Yes	<i>Sambucus deborensis</i>		<i>Sambucus deborensis</i>
<i>Satureja adamovicii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Satureja adamovicii</i>	<i>Satureja adamovicii</i>
<i>Satureja formanekiana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Satureja formanekiana</i>	<i>Satureja formanekiana</i>
<i>Saxifraga grisebachii</i> , var. <i>grisebachii</i> , f. <i>grisebachii</i> , f. <i>lindtneri</i> , var. <i>montenegrina</i>			None	None	None	None	No data	None	None	MKD	No		<i>Saxifraga grisebachii</i> , var. <i>grisebachii</i> , f. <i>grisebachii</i> , f. <i>lindtneri</i> , var. <i>montenegrina</i>	<i>Saxifraga grisebachii</i> , var. <i>grisebachii</i> , f. <i>grisebachii</i> , f. <i>lindtneri</i> , var. <i>montenegrina</i>
<i>Saxifraga karadzicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Saxifraga karadzicensis</i>	<i>Saxifraga karadzicensis</i>
<i>Scrophularia emi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Scrophularia emi</i>	<i>Scrophularia emi</i>
<i>Sempervivum galicicum</i>			None	None	None	None	No data	None	None	Galichica Mt.	No		<i>Sempervivum galicicum</i>	<i>Sempervivum galicicum</i>
<i>Sempervivum kindingeri</i>			None	None	None	None	No data	None	None	No	Yes		<i>Sempervivum kindingeri</i>	<i>Sempervivum kindingeri</i>
<i>Sempervivum klepae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sempervivum klepae</i>	<i>Sempervivum klepae</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Sempervivum koshaninii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Sempervivum koshaninii</i>	<i>Sempervivum koshaninii</i>
<i>Sempervivum macedonicum</i>			None	None	None	None	No data	None	None	No	Yes		<i>Sempervivum macedonicum</i>	<i>Sempervivum macedonicum</i>
<i>Sempervivum octopodes</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Sempervivum octopodes</i>		<i>Sempervivum octopodes</i>
<i>Sempervivum thompsonianum</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Sempervivum thompsonianum</i>		<i>Sempervivum thompsonianum</i>
<i>Senecio paludosus</i>	Fen Ragwort		None	None	None	None	No data	None	None	No	Yes		<i>Senecio paludosus</i>	<i>Senecio paludosus</i>
<i>Seseli vandasii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Seseli vandasii</i>	<i>Seseli vandasii</i>
<i>Sideritis raeseri</i>			None	None	None	None	No data	None	None	No	No		<i>Sideritis raeseri</i>	<i>Sideritis raeseri</i>
<i>Sideritis scardica</i>		Sharplaninski chaj	None	None	None	None	No data	None	None	No	Yes		<i>Sideritis scardica</i>	<i>Sideritis scardica</i>
<i>Silene horvatii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Silene horvatii</i>	<i>Silene horvatii</i>
<i>Silene paeoniensis</i>			None	None	None	None	No data	None	None	Chebren	Yes	<i>Silene paeoniensis</i>		<i>Silene paeoniensis</i>
<i>Silene prilepensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Silene prilepensis</i>	<i>Silene prilepensis</i>
<i>Silene schmuckeri</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Silene schmuckeri</i>		<i>Silene schmuckeri</i>
<i>Silene viscariopsis</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Silene viscariopsis</i>		<i>Silene viscariopsis</i>
<i>Soldanella pindicola</i>			None	None	None	None	No data	None	None	No	Yes		<i>Soldanella pindicola</i>	<i>Soldanella pindicola</i>
<i>Solenanthus scardicus</i>			None	None	None	None	No data	None	None	No	Yes		<i>Solenanthus scardicus</i>	<i>Solenanthus scardicus</i>
<i>Stachys babunensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Stachys babunensis</i>	<i>Stachys babunensis</i>
<i>Stachys macedonica</i>		Makedonski Chistec	None	None	None	None	No data	None	None	MKD	No		<i>Stachys macedonica</i>	<i>Stachys macedonica</i>
<i>Stipa rechingeri</i>			None	None	None	None	No data	None	None	No	Yes		<i>Stipa rechingeri</i>	<i>Stipa rechingeri</i>
<i>Suaeda maritima</i>			None	None	None	None	No data	None	None	No	Yes		<i>Suaeda maritima</i>	<i>Suaeda maritima</i>
<i>Taraxacum apiculatoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Taraxacum apiculatoides</i>	<i>Taraxacum apiculatoides</i>
<i>Thesium macedonicum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Thesium macedonicum</i>	<i>Thesium macedonicum</i>
<i>Thymus alsharensis</i>		Alsharska majchina dushichka	None	None	None	None	No data	None	None	Alshar	Yes	<i>Thymus alsharensis</i>		<i>Thymus alsharensis</i>
<i>Thymus karadzicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Thymus karadzicensis</i>	<i>Thymus karadzicensis</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Thymus oehmianus</i>		Emova majchina dushichka	None	None	None	None	No data	None	None	Kapina, r. Ocha	Yes	<i>Thymus oehmianus</i>		<i>Thymus oehmianus</i>
<i>Thymus skopjenensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Thymus skopjenensis</i>	<i>Thymus skopjenensis</i>
<i>Tozzia carpathica</i>	Tozzia	Karpatska Tozia	None	II/IV	None	None	No data	None	None	No	No		<i>Tozzia carpathica</i>	<i>Tozzia carpathica</i>
<i>Tragopogon kindigeri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tragopogon kindigeri</i>	<i>Tragopogon kindigeri</i>
<i>Trapa natans</i>	Water Chestnut		None	None	I	None	No data	None	None	No	No			
<i>Tulipa marianae</i>		Marijanovo Lale	None	None	None	None	No data	None	None	Orlovo Brdo	Yes	<i>Tulipa marianae</i>		<i>Tulipa marianae</i>
<i>Tulipa scardica</i>		Sharplaninsko Lale	None	None	None	None	No data	None	None	MKD	No		<i>Tulipa scardica</i>	<i>Tulipa scardica</i>
<i>Verbascum adenantum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Verbascum adenantum</i>	<i>Verbascum adenantum</i>
<i>Verbascum chrysanthum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Verbascum chrysanthum</i>	<i>Verbascum chrysanthum</i>
<i>Verbascum herzogi</i>			None	None	None	None	No data	None	None	MKD	Yes	<i>Verbascum herzogi</i>		<i>Verbascum herzogi</i>
<i>Verbascum lesnovoensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Verbascum lesnovoensis</i>	<i>Verbascum lesnovoensis</i>
<i>Verbascum macedonicum</i>		Makedonski Babjak	None	None	None	None	No data	None	None	MKD	Yes	<i>Verbascum macedonicum</i>		<i>Verbascum macedonicum</i>
<i>Verbascum pachyurum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Verbascum pachyurum</i>	<i>Verbascum pachyurum</i>
<i>Veronica kindlii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Veronica kindlii</i>	<i>Veronica kindlii</i>
<i>Vicia montenegrina</i>			None	None	None	None	No data	None	None	No	Yes		<i>Vicia montenegrina</i>	<i>Vicia montenegrina</i>
<i>Viola allchariensis</i>		Alcharska Temjanushka	None	None	None	None	No data	None	None	Alshar	Yes	<i>Viola allchariensis</i>		<i>Viola allchariensis</i>
<i>Viola arsenica</i>		Arsenska Temjanushka	None	None	None	None	No data	None	None	Alshar	Yes	<i>Viola arsenica</i>		<i>Viola arsenica</i>
<i>Viola babunensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Viola babunensis</i>	<i>Viola babunensis</i>
<i>Viola bornmuelleri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Viola bornmuelleri</i>	<i>Viola bornmuelleri</i>
<i>Viola brachyphylla</i>			None	None	None	None	No data	None	None	No	Yes		<i>Viola brachyphylla</i>	<i>Viola brachyphylla</i>
<i>Viola elegantula</i>			None	None	None	None	No data	None	None	No	Yes		<i>Viola elegantula</i>	<i>Viola elegantula</i>
<i>Viola eximia</i>			None	None	None	None	No data	None	None	No	Yes		<i>Viola eximia</i>	<i>Viola eximia</i>
<i>Viola gostivarensis</i>		Gostivarska Temjanushka	None	None	None	None	No data	None	None	MKD	No		<i>Viola gostivarensis</i>	<i>Viola gostivarensis</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Viola halacsyana</i> ( <i>V. allchariensis</i> x <i>V. arsenica</i> )			None	None	None	None	No data	None	None	MKD	No		<i>Viola halacsyana</i> ( <i>V. allchariensis</i> x <i>V. arsenica</i> )	<i>Viola halacsyana</i> ( <i>V. allchariensis</i> x <i>V. arsenica</i> )
<i>Viola herzogi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Viola herzogi</i>	<i>Viola herzogi</i>
<i>Viola ivonis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Viola ivonis</i>	<i>Viola ivonis</i>
<i>Viola kosaninii</i>			None	None	None	None	No data	None	None	No	Yes	<i>Viola kosaninii</i>		<i>Viola kosaninii</i>
<i>Viola schariensis</i>		Sharplaninska Temjanushka	None	None	None	None	No data	None	None	MKD	No		<i>Viola schariensis</i>	<i>Viola schariensis</i>
<i>Viola slavikii</i>				None	None	None	No data	None	None	MKD	No		<i>Viola slavikii</i>	<i>Viola slavikii</i>
<i>Viola stojanowii</i>			None	None	None	None	No data	None	None	No	Yes		<i>Viola stojanowii</i>	<i>Viola stojanowii</i>
<b>INVERTEBRATES (Invertebrata)</b>														
<b>SPONGES (Porifera)</b>														
<i>Eunapius carteri dojranensis</i>		Dojranski Sunger, Kamenjarche	None	None	None	None	No data	None	None	MKD (Lake Doyran)	No		<i>Eunapius carteri dojranensis</i>	<i>Eunapius carteri dojranensis</i>
<i>Ochridaspongia rotunda</i>			None	None	None	None	No data	None	None	MKD (Lake Ohrid)	No		<i>Ochridaspongia rotunda</i>	<i>Ochridaspongia rotunda</i>
<i>Ochridospongia interlithonis</i>			None	None	None	None	No data	None	None	MKD (Lake Ohrid)	No		<i>Ochridospongia interlithonis</i>	<i>Ochridospongia interlithonis</i>
<i>Ochridospongilla stankovici</i>			None	None	None	None	No data	None	None	MKD (Lake Ohrid)	No		<i>Ochridospongilla stankovici</i>	<i>Ochridospongilla stankovici</i>
<i>Spongilla prespensis</i>			None	None	None	None	No data	None	None	MKD (Lake Prespa)	No		<i>Spongilla prespensis</i>	<i>Spongilla prespensis</i>
<i>Spongilla stankovici</i>			None	None	None	None	No data	None	None	MKD (Lake Ohrid)	No		<i>Spongilla stankovici</i>	<i>Spongilla stankovici</i>
<b>MOLLUSCS (Mollusca) - Gastropods (Gastropoda)</b>														
<i>Acroloxus improvisus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Acroloxus improvisus</i>	<i>Acroloxus improvisus</i>
<i>Acroloxus macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Acroloxus macedonicus</i>	<i>Acroloxus macedonicus</i>
<i>Allaegopsis skanderbegianus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Ancylus erectus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ancylus erectus</i>	<i>Ancylus erectus</i>
<i>Ancylus lapicidus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ancylus lapicidus</i>	<i>Ancylus lapicidus</i>
<i>Ancylus paratapurulus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ancylus paratapurulus</i>	<i>Ancylus paratapurulus</i>
<i>Ancylus scalariformis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ancylus scalariformis</i>	<i>Ancylus scalariformis</i>



Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Ancylus tapirulus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ancylus tapirulus</i>	<i>Ancylus tapirulus</i>
<i>Ancylus usunovi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ancylus usunovi</i>	<i>Ancylus usunovi</i>
<i>Argna macrodonta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Argna macrodonta</i>	<i>Argna macrodonta</i>
<i>Baglivia karamani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Baglivia karamani</i>	<i>Baglivia karamani</i>
<i>Balea (Alinda) biplicata hessei</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Balea (Pseudalinda) fallax</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Balea (Pseudalinda) fallax golesnicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Balea (Pseudalinda) fallax golesnicensis</i>	<i>Balea (Pseudalinda) fallax golesnicensis</i>
<i>Balea (Pseudalinda) nordsiecki</i>			None	None	None	None	No data	None	None	MKD	No		<i>Balea (Pseudalinda) nordsiecki</i>	<i>Balea (Pseudalinda) nordsiecki</i>
<i>Balea (Pseudalinda) serbica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Bulgarica (Denticularia) thessalonica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Bythinella drimica drimica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Bythinella drimica drimica</i>	<i>Bythinella drimica drimica</i>
<i>Carinigera drenovoensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Carinigera drenovoensis</i>	<i>Carinigera drenovoensis</i>
<i>Carinigera octava</i>			None	None	None	None	No data	None	None	MKD	No		<i>Carinigera octava</i>	<i>Carinigera octava</i>
<i>Carinigera pellucida</i>			None	None	None	None	No data	None	None	MKD	No		<i>Carinigera pellucida</i>	<i>Carinigera pellucida</i>
<i>Carinigera septim</i>			None	None	None	None	No data	None	None	MKD	No		<i>Carinigera septim</i>	<i>Carinigera septim</i>
<i>Chilopyrgula sturanyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chilopyrgula sturanyi</i>	<i>Chilopyrgula sturanyi</i>
<i>Chondrula macedonica macedonica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Delima decipiens</i>			None	None	None	None	No data	None	None	MKD	No		<i>Delima decipiens</i>	<i>Delima decipiens</i>
<i>Deroceras (Deroceras) sturanyi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Deroceras (Deroceras) turcicum</i>			None	None	None	None	No data	None	None	Balkans	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Dolapia ornata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dolapia ornata</i>	<i>Dolapia ornata</i>
<i>Euxinella radikae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Euxinella radikae</i>	<i>Euxinella radikae</i>
<i>Ferrissia ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ferrissia ohridana</i>	<i>Ferrissia ohridana</i>
<i>Ginaia munda munda</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ginaia munda munda</i>	<i>Ginaia munda munda</i>
<i>Ginaia munda sublitoralis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ginaia munda sublitoralis</i>	<i>Ginaia munda sublitoralis</i>
<i>Gocea ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gocea ohridana</i>	<i>Gocea ohridana</i>
<i>Graecoanatolica macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Graecoanatolica macedonica</i>	<i>Graecoanatolica macedonica</i>
<i>Grossuana serbica macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Grossuana serbica macedonica</i>	<i>Grossuana serbica macedonica</i>
<i>Grossuana serbica scupica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Grossuana serbica scupica</i>	<i>Grossuana serbica scupica</i>
<i>Gyralina (Spelaeopatula) gyralinaeformis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyralina (Spelaeopatula) gyralinaeformis</i>	<i>Gyralina (Spelaeopatula) gyralinaeformis</i>
<i>Gyralina (Spelaeopatula) tarabosensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Gyralina korabensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyralina korabensis</i>	<i>Gyralina korabensis</i>
<i>Gyralina mirabilis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyralina mirabilis</i>	<i>Gyralina mirabilis</i>
<i>Gyralina rempei</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyralina rempei</i>	<i>Gyralina rempei</i>
<i>Gyralina velkovrhi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyralina velkovrhi</i>	<i>Gyralina velkovrhi</i>
<i>Gyraulus (Gyraulus) albidus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyraulus (Gyraulus) albidus</i>	<i>Gyraulus (Gyraulus) albidus</i>
<i>Gyraulus (Gyraulus) lychnidicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyraulus (Gyraulus) lychnidicus</i>	<i>Gyraulus (Gyraulus) lychnidicus</i>
<i>Gyraulus (Gyraulus) paradoxus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyraulus (Gyraulus) paradoxus</i>	<i>Gyraulus (Gyraulus) paradoxus</i>
<i>Gyraulus (Gyraulus) crenophilus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyraulus (Gyraulus) crenophilus</i>	<i>Gyraulus (Gyraulus) crenophilus</i>
<i>Gyraulus (Gyraulus) fontinalis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyraulus (Gyraulus) fontinalis</i>	<i>Gyraulus (Gyraulus) fontinalis</i>
<i>Gyraulus (Gyraulus) stankovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyraulus (Gyraulus) stankovici</i>	<i>Gyraulus (Gyraulus) stankovici</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Gyraulus(Gyraulus) trapezoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gyraulus(Gyraulus) trapezoides</i>	<i>Gyraulus(Gyraulus) trapezoides</i>
<i>Helicella macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Helicella macedonica</i>	<i>Helicella macedonica</i>
<i>Helicigona (Cattania) inflata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Helicigona (Cattania) inflata</i>	<i>Helicigona (Cattania) inflata</i>
<i>Helicigona (Dinarica) serbica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helicigona (Liburnica) dunjana</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helicigona korabensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helicigona trizona haberhaueri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helicigona trizona ljubetenensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Helicigona trizona ljubetenensis</i>	<i>Helicigona trizona ljubetenensis</i>
<i>Helicigona trizona pseudocingulata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Helicigona trizona pseudocingulata</i>	<i>Helicigona trizona pseudocingulata</i>
<i>Helicigona trizona rumelica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helicodonta albanica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helicopsis rhabdotoides</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helicopsis striata</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helix dormitoris</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helix figulina</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helix pelagonesica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Helix pelagonesica</i>	<i>Helix pelagonesica</i>
<i>Helix pelagonesica vardarica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Helix pelagonesica vardarica</i>	<i>Helix pelagonesica vardarica</i>
<i>Helix pomatia arnautorum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Helix pomatia arnautorum</i>	<i>Helix pomatia arnautorum</i>
<i>Helix pomatia serbica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helix secernenda</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helix vladika</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Helix vulgaris</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Horatia macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Horatia macedonica</i>	<i>Horatia macedonica</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Horatia novoselensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Horatia novoselensis</i>	<i>Horatia novoselensis</i>
<i>Iglica macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Iglica macedonica</i>	<i>Iglica macedonica</i>
<i>Isabelaria lophaucena</i>			None	None	None	None	No data	None	None	MKD	No		<i>Isabelaria lophaucena</i>	<i>Isabelaria lophaucena</i>
<i>Isabelaria perplana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Isabelaria perplana</i>	<i>Isabelaria perplana</i>
<i>Lehmannia brunneri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Lehmannia marginata</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Lehmannia szigethyae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lehmannia szigethyae</i>	<i>Lehmannia szigethyae</i>
<i>Limax cephalonicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Limax conemenosi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Limax graecus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Limax wohlberedti</i>			None	None	None	None	No data	None	None	MKD	No		<i>Limax wohlberedti</i>	<i>Limax wohlberedti</i>
<i>Lindholmiola corcyrensis corcyrensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Lyhndia gjorgjevici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lyhndia gjorgjevici</i>	<i>Lyhndia gjorgjevici</i>
<i>Lyhndia hadzii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lyhndia hadzii</i>	<i>Lyhndia hadzii</i>
<i>Lyhndia karamani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lyhndia karamani</i>	<i>Lyhndia karamani</i>
<i>Lyhndia stankovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lyhndia stankovici</i>	<i>Lyhndia stankovici</i>
<i>Lyhndia sublitoralis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lyhndia sublitoralis</i>	<i>Lyhndia sublitoralis</i>
<i>Lymnaea relicta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lymnaea relicta</i>	<i>Lymnaea relicta</i>
<i>Macedonica frauenfeldi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Macedonica macedonica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Macedonica macedonica macedonica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Macedonica macedonica slavica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Macedonica macedonica slavica</i>	<i>Macedonica macedonica slavica</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Macedopyrgula pavlovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Macedopyrgula pavlovici</i>	<i>Macedopyrgula pavlovici</i>
<i>Macedopyrgula wagneri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Macedopyrgula wagneri</i>	<i>Macedopyrgula wagneri</i>
<i>Malacolimax mrazeki</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Mentisella rebeli</i>			None	None	None	None	No data	None	None	MKD	No		<i>Mentisella rebeli</i>	<i>Mentisella rebeli</i>
<i>Micromelania relictica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Micromelania relictica</i>	<i>Micromelania relictica</i>
<i>Micropyrgula stankovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Micropyrgula stankovici</i>	<i>Micropyrgula stankovici</i>
<i>Monacha dofleini</i>			None	None	None	None	No data	None	None	MKD	No		<i>Monacha dofleini</i>	<i>Monacha dofleini</i>
<i>Montenegrina doflein</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Montenegrina dofleini dofleini</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina dofleini dofleini</i>	<i>Montenegrina dofleini dofleini</i>
<i>Montenegrina dofleini pinteri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina dofleini pinteri</i>	<i>Montenegrina dofleini pinteri</i>
<i>Montenegrina janinensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Montenegrina janinensis attemsi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina janinensis attemsi</i>	<i>Montenegrina janinensis attemsi</i>
<i>Montenegrina janinensis fagorum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina janinensis fagorum</i>	<i>Montenegrina janinensis fagorum</i>
<i>Montenegrina janinensis jakupicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina janinensis jakupicensis</i>	<i>Montenegrina janinensis jakupicensis</i>
<i>Montenegrina perstriata</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Montenegrina perstriata crassa</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina perstriata crassa</i>	<i>Montenegrina perstriata crassa</i>
<i>Montenegrina perstriata diminuta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina perstriata diminuta</i>	<i>Montenegrina perstriata diminuta</i>
<i>Montenegrina perstriata ochridensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina perstriata ochridensis</i>	<i>Montenegrina perstriata ochridensis</i>
<i>Montenegrina perstriata radikae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina perstriata radikae</i>	<i>Montenegrina perstriata radikae</i>
<i>Montenegrina stankovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Montenegrina stankovici</i>	<i>Montenegrina stankovici</i>
<i>Morlina glabra striarius</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Neofossarulus stankovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neofossarulus stankovici</i>	<i>Neofossarulus stankovici</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Ohridoauffenia depressa</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridoauffenia depressa</i>	<i>Ohridoauffenia depressa</i>
<i>Ohridoauffenia drimica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridoauffenia drimica</i>	<i>Ohridoauffenia drimica</i>
<i>Ohridoauffenia minuta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridoauffenia minuta</i>	<i>Ohridoauffenia minuta</i>
<i>Ohridoauffenia rotonda</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridoauffenia rotonda</i>	<i>Ohridoauffenia rotonda</i>
<i>Ohridoauffenia sanctinaumi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridoauffenia sanctinaumi</i>	<i>Ohridoauffenia sanctinaumi</i>
<i>Ohridoauffenia sublitoralis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridoauffenia sublitoralis</i>	<i>Ohridoauffenia sublitoralis</i>
<i>Ohridohoratia carinata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridohoratia carinata</i>	<i>Ohridohoratia carinata</i>
<i>Ohridohoratia pygmaea</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridohoratia pygmaea</i>	<i>Ohridohoratia pygmaea</i>
<i>Ohridopyrgula macedonica charensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridopyrgula macedonica charensis</i>	<i>Ohridopyrgula macedonica charensis</i>
<i>Ohridopyrgula macedonica macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohridopyrgula macedonica macedonica</i>	<i>Ohridopyrgula macedonica macedonica</i>
<i>Ohrigocea karevi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohrigocea karevi</i>	<i>Ohrigocea karevi</i>
<i>Ohrigocea miladinovororum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohrigocea miladinovororum</i>	<i>Ohrigocea miladinovororum</i>
<i>Ohrigocea samuili</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohrigocea samuili</i>	<i>Ohrigocea samuili</i>
<i>Ohrigocea stankovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ohrigocea stankovici</i>	<i>Ohrigocea stankovici</i>
<i>Orcula wagneri ljbetenensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Orcula wagneri ljbetenensis</i>	<i>Orcula wagneri ljbetenensis</i>
<i>Orientalina curta kicavica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Orientalina curta kicavica</i>	<i>Orientalina curta kicavica</i>
<i>Parabythinella macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Parabythinella macedonica</i>	<i>Parabythinella macedonica</i>
<i>Planorbis (Planorbis) macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Planorbis (Planorbis) macedonicus</i>	<i>Planorbis (Planorbis) macedonicus</i>
<i>Polinskiola polinskii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Polinskiola polinskii</i>	<i>Polinskiola polinskii</i>
<i>Polinskiola sturanyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Polinskiola sturanyi</i>	<i>Polinskiola sturanyi</i>
<i>Prespiana lacustris</i>			None	None	None	None	No data	None	None	MKD	No		<i>Prespiana lacustris</i>	<i>Prespiana lacustris</i>
<i>Prespolitorea valvataeformis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Prespolitorea valvataeformis</i>	<i>Prespolitorea valvataeformis</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Prespopyrgula prespaensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Prespopyrgula prespaensis</i>	<i>Prespopyrgula prespaensis</i>
<i>Pseudohoratia brusinae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pseudohoratia brusinae</i>	<i>Pseudohoratia brusinae</i>
<i>Pseudohoratia lacustris</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pseudohoratia lacustris</i>	<i>Pseudohoratia lacustris</i>
<i>Pseudohoratia ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pseudohoratia ohridana</i>	<i>Pseudohoratia ohridana</i>
<i>Pyrgohydrobia grochmalickii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pyrgohydrobia grochmalickii</i>	<i>Pyrgohydrobia grochmalickii</i>
<i>Pyrgohydrobia jablanicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pyrgohydrobia jablanicensis</i>	<i>Pyrgohydrobia jablanicensis</i>
<i>Pyrgohydrobia sanctinaumi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pyrgohydrobia sanctinaumi</i>	<i>Pyrgohydrobia sanctinaumi</i>
<i>Stankovicia baicaliiformis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Stankovicia baicaliiformis</i>	<i>Stankovicia baicaliiformis</i>
<i>Strigilodelima conspersa</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Strugia ohridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Strugia ohridana</i>	<i>Strugia ohridana</i>
<i>Tandonia albanica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tandonia kusceri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tandonia kusceri</i>	<i>Tandonia kusceri</i>
<i>Tandonia macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tandonia macedonica</i>	<i>Tandonia macedonica</i>
<i>Tandonia sapkarevi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tandonia sapkarevi</i>	<i>Tandonia sapkarevi</i>
<i>Tandonia serbica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tandonia serbica</i>	<i>Tandonia serbica</i>
<i>Trachyohridia filocincta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trachyohridia filocincta</i>	<i>Trachyohridia filocincta</i>
<i>Triloba sandrii</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Triloba thaumasia</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Triloba thaumasia faueri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Triloba thaumasia faueri</i>	<i>Triloba thaumasia faueri</i>
<i>Triloba thaumasia talevi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Triloba thaumasia talevi</i>	<i>Triloba thaumasia talevi</i>
<i>Valvata (Cincinna) stenoterma</i>			None	None	None	None	No data	None	None	MKD	No		<i>Valvata (Cincinna) stenoterma</i>	<i>Valvata (Cincinna) stenoterma</i>
<i>Valvata (Costovalvata) hirsutecostata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Valvata (Costovalvata) hirsutecostata</i>	<i>Valvata (Costovalvata) hirsutecostata</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Valvata (Costovalvata) rhabdota</i>			None	None	None	None	No data	None	None	MKD	No		<i>Valvata (Costovalvata) rhabdota</i>	<i>Valvata (Costovalvata) rhabdota</i>
<i>Valvata (Ohridotropidina) relicta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Valvata (Ohridotropidina) relicta</i>	<i>Valvata (Ohridotropidina) relicta</i>
<i>Vestia (Brabenecia) ranojevici</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Vestia (Brabenecia) ranojevici ranojevici</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Vitrea bulgarica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Vitrea diaphana erjaveci</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Vitrea illyrica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Vitrea kutschigi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Vitrea mikuskai</i>			None	None	None	None	No data	None	None	MKD	No		<i>Vitrea mikuskai</i>	<i>Vitrea mikuskai</i>
<i>Vitrea pygmaea</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Vitrea siveci</i>			None	None	None	None	No data	None	None	MKD	No		<i>Vitrea siveci</i>	<i>Vitrea siveci</i>
<i>Vitrea sturanyi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Xestopyrgula dybowskii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Xestopyrgula dybowskii</i>	<i>Xestopyrgula dybowskii</i>
<i>Zaumia kusceri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zaumia kusceri</i>	<i>Zaumia kusceri</i>
<i>Zaumia sanctizaumi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zaumia sanctizaumi</i>	<i>Zaumia sanctizaumi</i>
<b>MOLLUSCS (Mollusca) - Bivalves (Bivalvia)</b>														
<i>Dreissena blanci</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dreissena blanci</i>	<i>Dreissena blanci</i>
<i>Dreissena stankovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dreissena stankovici</i>	<i>Dreissena stankovici</i>
<i>Pisidium casertanum ponderosum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pisidium casertanum ponderosum</i>	<i>Pisidium casertanum ponderosum</i>
<i>Pisidium edlaueri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pisidium edlaueri</i>	<i>Pisidium edlaueri</i>
<i>Pisidium maasseni</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pisidium maasseni</i>	<i>Pisidium maasseni</i>
<i>Pisidium supinum recalvum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pisidium supinum recalvum</i>	<i>Pisidium supinum recalvum</i>



Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Unio crassus</i>	Thick Shelled River Mussel	Rechna Shkolka	None	II/IV	None	None	NT	None	None	No	No			
<b>SEGMENTED WORMS (Annelida)</b>														
<i>Allolobophora (Allolobophora) vardarensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Allolobophora (Allolobophora) vardarensis</i>	<i>Allolobophora (Allolobophora) vardarensis</i>
<i>Aporrectodea smaragdinoidea</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aporrectodea smaragdinoidea</i>	<i>Aporrectodea smaragdinoidea</i>
<i>Criodrilus ochridensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Criodrilus ochridensis</i>	<i>Criodrilus ochridensis</i>
<i>Dendrobaena macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dendrobaena macedonica</i>	<i>Dendrobaena macedonica</i>
<i>Dendrobaena sasensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dendrobaena sasensis</i>	<i>Dendrobaena sasensis</i>
<i>Dendrobaena (Dendrobaena) alpina mavrovensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dendrobaena (Dendrobaena) alpina mavrovensis</i>	<i>Dendrobaena (Dendrobaena) alpina mavrovensis</i>
<i>Dendrobaena (Dendrobaena) alpina popi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dendrobaena (Dendrobaena) alpina popi</i>	<i>Dendrobaena (Dendrobaena) alpina popi</i>
<i>Dendrobaena (Dendrobaena) kozuvsensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dendrobaena (Dendrobaena) kozuvsensis</i>	<i>Dendrobaena (Dendrobaena) kozuvsensis</i>
<i>Dendrobaena (Dendrobaena) olimpica pelisterica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dendrobaena (Dendrobaena) olimpica pelisterica</i>	<i>Dendrobaena (Dendrobaena) olimpica pelisterica</i>
<i>Dina lepinja</i>			None	None	None	None	No data	None	None	MKD	No		<i>Dina lepinja</i>	<i>Dina lepinja</i>
<i>Eiseniella ochridana ochridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Eiseniella ochridana ochridana</i>	<i>Eiseniella ochridana ochridana</i>
<i>Eiseniella ochridana profunda</i>			None	None	None	None	No data	None	None	MKD	No		<i>Eiseniella ochridana profunda</i>	<i>Eiseniella ochridana profunda</i>
<i>Haplotaxis gordioides dubius</i>			None	None	None	None	No data	None	None	MKD	No		<i>Haplotaxis gordioides dubius</i>	<i>Haplotaxis gordioides dubius</i>
<i>Helodrilus balcanicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Helodrilus balcanicus</i>	<i>Helodrilus balcanicus</i>
<i>Hirudo medicinalis</i>	Medicinal Leech	Medicinska Pijavica	None	None	III	None	NT	II	B	No	No			
<i>Isochaeta dojranensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Isochaeta dojranensis</i>	<i>Isochaeta dojranensis</i>
<i>Italobalkaniona demirkapiae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Italobalkaniona demirkapiae</i>	<i>Italobalkaniona demirkapiae</i>
<i>Italobalkaniona macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Italobalkaniona macedonica</i>	<i>Italobalkaniona macedonica</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Italobalkaniona pyrenaicoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Italobalkaniona pyrenaicoides</i>	<i>Italobalkaniona pyrenaicoides</i>
<i>Italobalkaniona stankovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Italobalkaniona stankovici</i>	<i>Italobalkaniona stankovici</i>
<i>Italobalkaniona treskavensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Italobalkaniona treskavensis</i>	<i>Italobalkaniona treskavensis</i>
<i>Lamprodrilus michaelsoni</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lamprodrilus michaelsoni</i>	<i>Lamprodrilus michaelsoni</i>
<i>Lamprodrilus pygmaeus f. intermedia</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lamprodrilus pygmaeus f. intermedia</i>	<i>Lamprodrilus pygmaeus f. intermedia</i>
<i>Lamprodrilus pygmaeus f. ochridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lamprodrilus pygmaeus f. ochridana</i>	<i>Lamprodrilus pygmaeus f. ochridana</i>
<i>Monopylephorus montanus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Monopylephorus montanus</i>	<i>Monopylephorus montanus</i>
<i>Peloscolex cernovitovi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Peloscolex cernovitovi</i>	<i>Peloscolex cernovitovi</i>
<i>Peloscolex stankovici f. litoralis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Peloscolex stankovici f. litoralis</i>	<i>Peloscolex stankovici f. litoralis</i>
<i>Peloscolex stankovici f. stankovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Peloscolex stankovici f. stankovici</i>	<i>Peloscolex stankovici f. stankovici</i>
<i>Peloscolex stankovici f. sublitoralis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Peloscolex stankovici f. sublitoralis</i>	<i>Peloscolex stankovici f. sublitoralis</i>
<i>Peloscolex tenuis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Peloscolex tenuis</i>	<i>Peloscolex tenuis</i>
<i>Potamothenix isochaetus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potamothenix isochaetus</i>	<i>Potamothenix isochaetus</i>
<i>Potamothenix ochridanus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potamothenix ochridanus</i>	<i>Potamothenix ochridanus</i>
<i>Potamothenix prespaensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potamothenix prespaensis</i>	<i>Potamothenix prespaensis</i>
<i>Psammoryctes ochridanus ochridanus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Psammoryctes ochridanus ochridanus</i>	<i>Psammoryctes ochridanus ochridanus</i>
<i>Psammoryctes ochridanus variabilis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Psammoryctes ochridanus variabilis</i>	<i>Psammoryctes ochridanus variabilis</i>
<i>Psammoryctes oligosetosus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Psammoryctes oligosetosus</i>	<i>Psammoryctes oligosetosus</i>
<i>Psammoryctides ochridanus ochridanus</i>			None	None	None	None	No data	None	None	Balkans	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Rhynchelmis komareki</i> f. <i>komareki</i>			None	None	None	None	No data	None	None	MKD	No		<i>Rhynchelmis komareki</i> f. <i>komareki</i>	<i>Rhynchelmis komareki</i> f. <i>komareki</i>
<i>Rhynchelmis komareki</i> f. <i>brevirostris</i>			None	None	None	None	No data	None	None	MKD	No		<i>Rhynchelmis komareki</i> f. <i>brevirostris</i>	<i>Rhynchelmis komareki</i> f. <i>brevirostris</i>
<i>Stylodrilus leucocephalus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Stylodrilus leucocephalus</i>	<i>Stylodrilus leucocephalus</i>
<b>ARTHROPODS (Arthropoda) - Arachnids (Arachnida)</b>														
<i>Amaurobius deelemanae</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Amaurobius timidus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Antrohyphantes balcanicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Antrohyphantes sophianus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Araeoncus clivifrons</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Brachythele icterica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Callobius claustrarius balcanicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Centromerus acutidentatus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Centromerus bulgarianus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Centromerus lakatnikensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Centromerus milleri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Centromerus sylvaticus paucidentatus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Centromerus valkanovi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Cheiracanthium macedonicum</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Coelotes brevispinus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Coelotes deltshevi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Coelotes jurinitschi</i>			None	None	None	None	No data	None	None	Balkans	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Coelotes kulczynskii</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Cryphoea pirini</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Cybaeus balkanus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Dasumia kusceri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Drassodes montenegrinus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Drepanotylus pirinicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Dysdera adriatica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Dysdera dubrovninii</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Dysdera pectinata</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Dysderocrates storkani</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Enoplognatha penelope</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Erigone longipalpis pirini</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Fageiella ensigera</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Gnaphosa expilator</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gnaphosa expilator</i>	<i>Gnaphosa expilator</i>
<i>Gnaphosa orchymonti</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Gonatium strugaense</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gonatium strugaense</i>	<i>Gonatium strugaense</i>
<i>Harpactea abantia</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Harpactea apollinea</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Harpactea deltshevi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Harpactea srednogora</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Harpactea strandjica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Harpactea sturanyi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Hispona hauseri</i>			None	None	None	None	No data	None	None	Balkans	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Hispona tranteevi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Hispona vignai</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Histopona bidens</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Hoplopholcus labyrinthi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Hypomma brevitibiale</i>			None	None	None	None	No data	None	None	MKD	No		<i>Hypomma brevitibiale</i>	<i>Hypomma brevitibiale</i>
<i>Lepthyphantes centromeroides</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Lepthyphantes trnovensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Lycosa macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lycosa macedonica</i>	<i>Lycosa macedonica</i>
<i>Macaroeris flavicomis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Macedoniella karamani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Macedoniella karamani</i>	<i>Macedoniella karamani</i>
<i>Mansuphantes rectilamellus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Mesiotelus cyprius scopensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Metopobactrus orbelicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Mughiphantes lithoclasticola</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Nemesia pannonica cohen</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Nesticus beroni</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Pachygnatha clerckoides</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Palliduphantes byzantinus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Palliduphantes speleorum</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Palliduphantes trnovensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Pardosa drenskii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pardosa drenskii</i>	<i>Pardosa drenskii</i>
<i>Pellenes moreanus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Philodromus hadzii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Philodromus hadzii</i>	<i>Philodromus hadzii</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Philodromus pelagonus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Philodromus pelagonus</i>	<i>Philodromus pelagonus</i>
<i>Poecilochroa ochridana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Poecilochroa ochridana</i>	<i>Poecilochroa ochridana</i>
<i>Protoleoneta beroni</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Protoleoneta bulgarica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Pseudicius espereyi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Pseudicius kulczynskii</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Pterotricha extiabilis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pterotricha extiabilis</i>	<i>Pterotricha extiabilis</i>
<i>Saitis graecus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tegenarea paragamiani</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tegenaria argaica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tegenaria bithyniae</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tegenaria hasperi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tegenaria regispyrhi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tegenaria rilaensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tenuiphantes drenskyi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Thanatus vulgaris creticus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Theridion adrianopoli</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Theridion peristeri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Theridion peristeri</i>	<i>Theridion peristeri</i>
<i>Titanoeca incerta</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Trachyzelotes malkini</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Troglohyphantes dalmaticus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Troglohyphantes draconis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Troglohyphantes draconis</i>	<i>Troglohyphantes draconis</i>
<i>Troglohyphantes drenskii</i>			None	None	None	None	No data	None	None	Balkans	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Troglohyphantes inermis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Troglohyphantes inermis</i>	<i>Troglohyphantes inermis</i>
<i>Troglohyphantes kratochvili</i>			None	None	None	None	No data	None	None	MKD	No		<i>Troglohyphantes kratochvili</i>	<i>Troglohyphantes kratochvili</i>
<i>Xysticus macedonicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Xysticus tenebrosus ohridensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Xysticus tenebrosus ohridensis</i>	<i>Xysticus tenebrosus ohridensis</i>
<i>Zelotes babunaensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Zodarion aculeatum</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Zodarion epirense</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Zodarion ohridense</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Zodarion pirini</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Zodarion turcicum</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Zora affinis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zora affinis</i>	<i>Zora affinis</i>
<i>Zora prespaensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zora prespaensis</i>	<i>Zora prespaensis</i>
<b>ARTHROPODS (Arthropoda) - Arachnids (Arachnida) - False scorpions (Pseudoscorpiones)</b>														
<i>Allochernes balcanicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Atemnus balcanicus</i> Hadži, 1937			None	None	None	None	No data	None	None	MKD	No		<i>Atemnus balcanicus</i> Hadži, 1937	<i>Atemnus balcanicus</i> Hadži, 1937
<i>Chthonius (Chthonius) karamanianus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Chthonius) karamanianus</i>	<i>Chthonius (Chthonius) karamanianus</i>
<i>Chthonius (Chthonius) macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Chthonius) macedonicus</i>	<i>Chthonius (Chthonius) macedonicus</i>
<i>Chthonius (Chthonius) ognjankae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Chthonius) ognjankae</i>	<i>Chthonius (Chthonius) ognjankae</i>
<i>Chthonius (Chthonius) ohridanus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Chthonius) ohridanus</i>	<i>Chthonius (Chthonius) ohridanus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Chthonius (Chthonius) radigost</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Chthonius) radigost</i>	<i>Chthonius (Chthonius) radigost</i>
<i>Chthonius (Chthonius) tenuichelatus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Chthonius) tenuichelatus</i>	<i>Chthonius (Chthonius) tenuichelatus</i>
<i>Chthonius (Chthonius) troglobius</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Chthonius) troglobius</i>	<i>Chthonius (Chthonius) troglobius</i>
<i>Chthonius (Chthonius) vodan</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Chthonius) vodan</i>	<i>Chthonius (Chthonius) vodan</i>
<i>Chthonius (Chthonius) zmaj</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Chthonius) zmaj</i>	<i>Chthonius (Chthonius) zmaj</i>
<i>Chthonius (Ephippiochthonius) kupalo</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Ephippiochthonius) kupalo</i>	<i>Chthonius (Ephippiochthonius) kupalo</i>
<i>Chthonius (Ephippiochthonius) lychnidis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Ephippiochthonius) lychnidis</i>	<i>Chthonius (Ephippiochthonius) lychnidis</i>
<i>Chthonius (Ephippiochthonius) microtuberculatus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Chthonius (Ephippiochthonius) serbicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Ephippiochthonius) serbicus</i>	<i>Chthonius (Ephippiochthonius) serbicus</i>
<i>Chthonius (Ephippiochthonius) vid</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Ephippiochthonius) vid</i>	<i>Chthonius (Ephippiochthonius) vid</i>
<i>Chthonius (Globochthonius) perun</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chthonius (Globochthonius) perun</i>	<i>Chthonius (Globochthonius) perun</i>
<i>Neobisium golemanskyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neobisium golemanskyi</i>	<i>Neobisium golemanskyi</i>
<i>Neobisium karamani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neobisium karamani</i>	<i>Neobisium karamani</i>
<i>Neobisium korabense</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neobisium korabense</i>	<i>Neobisium korabense</i>
<i>Neobisium maksimodorovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neobisium maksimodorovici</i>	<i>Neobisium maksimodorovici</i>
<i>Neobisium merdieserbicum</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Neobisium muscorum balcanicum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neobisium muscorum balcanicum</i>	<i>Neobisium muscorum balcanicum</i>
<i>Neobisium ohridanum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neobisium ohridanum</i>	<i>Neobisium ohridanum</i>



Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Neobisium princeps</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neobisium princeps</i>	<i>Neobisium princeps</i>
<i>Neobisium vladimirpantici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neobisium vladimirpantici</i>	<i>Neobisium vladimirpantici</i>
<i>Roncus dazbog</i>			None	None	None	None	No data	None	None	MKD	No		<i>Roncus dazbog</i>	<i>Roncus dazbog</i>
<i>Roncus jaoreci</i>			None	None	None	None	No data	None	None	MKD	No		<i>Roncus jaoreci</i>	<i>Roncus jaoreci</i>
<i>Roncus kikimora</i>			None	None	None	None	No data	None	None	MKD	No		<i>Roncus kikimora</i>	<i>Roncus kikimora</i>
<i>Roncus lychnidis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Roncus lychnidis</i>	<i>Roncus lychnidis</i>
<i>Roncus rujevit</i>			None	None	None	None	No data	None	None	MKD	No		<i>Roncus rujevit</i>	<i>Roncus rujevit</i>
<i>Roncus stankokaramani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Roncus stankokaramani</i>	<i>Roncus stankokaramani</i>
<i>Roncus veles</i>			None	None	None	None	No data	None	None	MKD	No		<i>Roncus veles</i>	<i>Roncus veles</i>
<i>Toxochernes karamani</i>			None	None	None	None	No data	None	None	Balkans	No			
<b>ARTHROPODS (Arthropoda) - Crustaceans (Crustacea)</b>														
<i>Acanthocyclops robustus f. limnetica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Acanthocyclops robustus f. limnetica</i>	<i>Acanthocyclops robustus f. limnetica</i>
<i>Allocyclops kieferi</i> Petkovski			None	None	None	None	No data	None	None	MKD	No		<i>Allocyclops kieferi</i> Petkovski	<i>Allocyclops kieferi</i> Petkovski
<i>Allocyclops minutissimus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Allocyclops minutissimus</i>	<i>Allocyclops minutissimus</i>
<i>Alona smirnovi</i>			None	None	None	None	VU	None	None	Lake Ohrid	No		<i>Alona smirnovi</i>	<i>Alona smirnovi</i>
<i>Asellus aquaticus balcanicus</i>			None	None	None	None	No data	None	None	Bitola	No		<i>Asellus aquaticus balcanicus</i>	<i>Asellus aquaticus balcanicus</i>
<i>Astacus astacus</i>	River Crayfish	Rechen Rak	None	None	III	None	VU	None	None	No	No		<i>Astacus astacus</i>	<i>Astacus astacus</i>
<i>Austropotamobius torrentium</i>	Stream or Stone Crayfish	Potochen Rak	None	II	III	None	VU	None	None	No	No		<i>Austropotamobius torrentium</i>	<i>Austropotamobius torrentium</i>
<i>Balkanostenasellus skopjensis meridionalis</i>			None	None	None	None	No data	None	None	Doyran	No		<i>Balkanostenasellus skopjensis meridionalis</i>	<i>Balkanostenasellus skopjensis meridionalis</i>
<i>Balkanostenasellus skopjensis skopjensis</i>			None	None	None	None	No data	None	None	Skopje Valley	No		<i>Balkanostenasellus skopjensis skopjensis</i>	<i>Balkanostenasellus skopjensis skopjensis</i>
<i>Bogidiella glacilis</i>			None	None	None	None	No data	None	None	Jakupitza Mt.	No	<i>Bogidiella glacilis</i>		<i>Bogidiella glacilis</i>
<i>Bogidiella skopljensis</i>			None	None	None	None	No data	None	None	Skopje Valley	No		<i>Bogidiella skopljensis</i>	<i>Bogidiella skopljensis</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Bryocamptus (Rheocamptus) mirus</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Bryocamptus (Rheocamptus) mirus</i>	<i>Bryocamptus (Rheocamptus) mirus</i>
<i>Candona alta</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona alta</i>	<i>Candona alta</i>
<i>Candona dedelica</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona dedelica</i>	<i>Candona dedelica</i>
<i>Candona depressa</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona depressa</i>	<i>Candona depressa</i>
<i>Candona expansa</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona expansa</i>	<i>Candona expansa</i>
<i>Candona formosa</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona formosa</i>	<i>Candona formosa</i>
<i>Candona goricensis</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona goricensis</i>	<i>Candona goricensis</i>
<i>Candona hadzistei</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona hadzistei</i>	<i>Candona hadzistei</i>
<i>Candona hartmanni</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona hartmanni</i>	<i>Candona hartmanni</i>
<i>Candona holmesi</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona holmesi</i>	<i>Candona holmesi</i>
<i>Candona jordeae</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona jordeae</i>	<i>Candona jordeae</i>
<i>Candona litoralis</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona litoralis</i>	<i>Candona litoralis</i>
<i>Candona lychnitis</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona lychnitis</i>	<i>Candona lychnitis</i>
<i>Candona margaritana</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona margaritana</i>	<i>Candona margaritana</i>
<i>Candona marginata</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona marginata</i>	<i>Candona marginata</i>
<i>Candona marginatoides</i>			None	None	None	None	No data	None	None	Lake Prespa	No		<i>Candona marginatoides</i>	<i>Candona marginatoides</i>
<i>Candona media</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona media</i>	<i>Candona media</i>
<i>Candona natronophila</i>			None	None	None	None	No data	None	None	MKD	No		<i>Candona natronophila</i>	<i>Candona natronophila</i>
<i>Candona ochrida</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona ochrida</i>	<i>Candona ochrida</i>
<i>Candona paloskii</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona paloskii</i>	<i>Candona paloskii</i>
<i>Candona strumicae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Candona strumicae</i>	<i>Candona strumicae</i>
<i>Candona triangulata</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona triangulata</i>	<i>Candona triangulata</i>
<i>Candona vidua</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Candona vidua</i>	<i>Candona vidua</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Chirocephalus diaphanous carinatus</i>			None	None	None	None	No data	None	None	Balkans	No			
<a href="#">↗</a>	Pelagonian Fairy Shrimp	Pelagonisko Vilinsko Rakche	None	None	None	None	VU	None	None	Upper Pelagonia	No	<i>Chirocephalus pelagonicus</i>		<i>Chirocephalus pelagonicus</i>
<i>Cyclops ochridanus</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Cyclops ochridanus</i>	<i>Cyclops ochridanus</i>
<i>Cypria karamani</i>			None	None	None	None	No data	None	None	Bitola	No		<i>Cypria karamani</i>	<i>Cypria karamani</i>
<i>Cypria obliqua</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Cypria obliqua</i>	<i>Cypria obliqua</i>
<i>Diacyclops ichnusoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Diacyclops ichnusoides</i>	<i>Diacyclops ichnusoides</i>
<i>Diacyclops pelagonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Diacyclops pelagonicus</i>	<i>Diacyclops pelagonicus</i>
<i>Diacyclops skopljensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Diacyclops skopljensis</i>	<i>Diacyclops skopljensis</i>
<i>Diacyclops stygius macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Diacyclops stygius macedonicus</i>	<i>Diacyclops stygius macedonicus</i>
<i>Elaphoidella brevipes</i>			None	None	None	None	No data	None	None	MKD	No		<i>Elaphoidella brevipes</i>	<i>Elaphoidella brevipes</i>
<i>Elaphoidella bulbifera</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Elaphoidella bulbifera</i>	<i>Elaphoidella bulbifera</i>
<i>Elaphoidella incerta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Elaphoidella incerta</i>	<i>Elaphoidella incerta</i>
<i>Elaphoidella necessaria</i>			None	None	None	None	No data	None	None	MKD	No		<i>Elaphoidella necessaria</i>	<i>Elaphoidella necessaria</i>
<i>Elaphoidella tenera</i>			None	None	None	None	No data	None	None	MKD	No		<i>Elaphoidella tenera</i>	<i>Elaphoidella tenera</i>
<i>Eucandona krstici</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Eucandona krstici</i>	<i>Eucandona krstici</i>
<i>Eucyclops subterraneus naphaeus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Eucyclops subterraneus naphaeus</i>	<i>Eucyclops subterraneus naphaeus</i>
<i>Eucypris bronsteini</i>			None	None	None	None	No data	None	None	MKD (Springs)	No		<i>Eucypris bronsteini</i>	<i>Eucypris bronsteini</i>
<i>Eucypris cf. heinrichi</i>			None	None	None	None	No data	None	None	Bistra Mnt	No	<i>Eucypris cf. heinrichi</i>		<i>Eucypris cf. heinrichi</i>
<i>Eucypris kurtziebeli</i>			None	None	None	None	No data	None	None	Pelister Springs	No	<i>Eucypris kurtziebeli</i>		<i>Eucypris kurtziebeli</i>
<i>Fabaeformiscandon a svetozari</i>			None	None	None	None	No data	None	None	Katlanovo	No	<i>Fabaeformiscandon a svetozari</i>		<i>Fabaeformiscandon a svetozari</i>
<i>Gammarus albimanus</i>			None	None	None	None	No data	None	None	Big Cave-Gostiv.	No	<i>Gammarus albimanus</i>		<i>Gammarus albimanus</i>
<i>Gammarus halilicae</i>			None	None	None	None	No data	None	None	Alilica Cave	No	<i>Gammarus halilicae</i>		<i>Gammarus halilicae</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Gammarus lychnidensis</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Gammarus lychnidensis</i>	<i>Gammarus lychnidensis</i>
<i>Gammarus macedonicus</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Gammarus macedonicus</i>	<i>Gammarus macedonicus</i>
<i>Gammarus ochridensis</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Gammarus ochridensis</i>	<i>Gammarus ochridensis</i>
<i>Gammarus parehiniformis</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Gammarus parehiniformis</i>	<i>Gammarus parehiniformis</i>
<i>Gammarus pavlovici pavlovici</i>			None	None	None	None	No data	None	None	Rasche Spring	No	<i>Gammarus pavlovici pavlovici</i>		<i>Gammarus pavlovici pavlovici</i>
<i>Gammarus pavlovici stankoi</i>			None	None	None	None	No data	None	None	Skopska Crna Gora Mt.	No	<i>Gammarus pavlovici stankoi</i>		<i>Gammarus pavlovici stankoi</i>
<i>Gammarus rambouseki</i>			None	None	None	None	No data	None	None	Pelister & Galicica	No	<i>Gammarus rambouseki</i>		<i>Gammarus rambouseki</i>
<i>Gammarus salemaai</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Gammarus salemaai</i>	<i>Gammarus salemaai</i>
<i>Gammarus solidus</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Gammarus solidus</i>	<i>Gammarus solidus</i>
<i>Gammarus stankokaramani</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Gammarus stankokaramani</i>	<i>Gammarus stankokaramani</i>
<i>Gammarus triacanthus prespensis</i>			None	None	None	None	No data	None	None	Lake Prespa	No		<i>Gammarus triacanthus prespensis</i>	<i>Gammarus triacanthus prespensis</i>
<i>Gammarus triacanthus semiarmatus</i>			None	None	None	None	No data	None	None	Valandovo	No	<i>Gammarus triacanthus semiarmatus</i>		<i>Gammarus triacanthus semiarmatus</i>
<i>Gammarus triacanthus strumicae</i>			None	None	None	None	No data	None	None	Strumitza	No	<i>Gammarus triacanthus strumicae</i>		<i>Gammarus triacanthus strumicae</i>
<i>Heterocypris erikae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Heterocypris erikae</i>	<i>Heterocypris erikae</i>
<i>Heterocypris gevgelica</i>			None	None	None	None	No data	None	None	Gevgelia Springs	No	<i>Heterocypris gevgelica</i>		<i>Heterocypris gevgelica</i>
<i>Ignolfiella acherontis</i>			None	None	None	None	No data	None	None	Skopje Valley	No		<i>Ignolfiella acherontis</i>	<i>Ignolfiella acherontis</i>
<i>Ignolfiella macedonica</i>			None	None	None	None	No data	None	None	River Pchinja	No	<i>Ignolfiella macedonica</i>		<i>Ignolfiella macedonica</i>
<i>Ignolfiella petkovskii</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Leptocythere angulata</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Leptocythere angulata</i>	<i>Leptocythere angulata</i>
<i>Leptocythere karamani</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Leptocythere karamani</i>	<i>Leptocythere karamani</i>
<i>Leptocythere ostrovskensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Leptocythere prespensis</i>			None	None	None	None	No data	None	None	Ohrid & Prespa	No		<i>Leptocythere prespensis</i>	<i>Leptocythere prespensis</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/ IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Leptocythere proboscidea</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Leptocythere proboscidea</i>	<i>Leptocythere proboscidea</i>
<i>Microcerberus stygius</i>			None	None	None	None	No data	None	None	Skopje Valley	No		<i>Microcerberus stygius</i>	<i>Microcerberus stygius</i>
<i>Microcyclops varicans f. dojranensis</i>			None	None	None	None	No data	None	None	Lake Doyran	No		<i>Microcyclops varicans f. dojranensis</i>	<i>Microcyclops varicans f. dojranensis</i>
<i>Niphargus bitoljensis</i>			None	None	None	None	No data	None	None	Bitola Spring	No	<i>Niphargus bitoljensis</i>		<i>Niphargus bitoljensis</i>
<i>Niphargus dojranensis</i>			None	None	None	None	No data	None	None	Doyran Spring	No	<i>Niphargus dojranensis</i>		<i>Niphargus dojranensis</i>
<i>Niphargus jovanovici jovanovici</i>			None	None	None	None	No data	None	None	Katlanovo Spring	No	<i>Niphargus jovanovici jovanovici</i>		<i>Niphargus jovanovici jovanovici</i>
<i>Niphargus macedonicus</i>			None	None	None	None	No data	None	None	Rasche Spring	No	<i>Niphargus macedonicus</i>		<i>Niphargus macedonicus</i>
<i>Niphargus maximus maximus</i>			None	None	None	None	No data	None	None	Shum Spring	No	<i>Niphargus maximus maximus</i>		<i>Niphargus maximus maximus</i>
<i>Niphargus maximus petkovskii</i>			None	None	None	None	No data	None	None	Ohrid Springs	No	<i>Niphargus maximus petkovskii</i>		<i>Niphargus maximus petkovskii</i>
<i>Niphargus ochridanus fontophilus</i>			None	None	None	None	No data	None	None	Ohrid Spring	No	<i>Niphargus ochridanus fontophilus</i>		<i>Niphargus ochridanus fontophilus</i>
<i>Niphargus ochridanus ochridanus</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Niphargus ochridanus ochridanus</i>	<i>Niphargus ochridanus ochridanus</i>
<i>Niphargus osogovensis</i>			None	None	None	None	No data	None	None	Osogovo Mnt	No	<i>Niphargus osogovensis</i>		<i>Niphargus osogovensis</i>
<i>Niphargus pancici pancici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Niphargus pancici pancici</i>	<i>Niphargus pancici pancici</i>
<i>Niphargus parvus Karaman</i>			None	None	None	None	No data	None	None	Bel Bunar-Skopje	No	<i>Niphargus parvus Karaman</i>		<i>Niphargus parvus Karaman</i>
<i>Niphargus pellagonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Niphargus pellagonicus</i>	<i>Niphargus pellagonicus</i>
<i>Niphargus sanctinaumi</i>			None	None	None	None	No data	None	None	St. Naum's Spring	No	<i>Niphargus sanctinaumi</i>		<i>Niphargus sanctinaumi</i>
<i>Niphargus skopljensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Niphargus skopljensis</i>	<i>Niphargus skopljensis</i>
<i>Niphargus stankoi</i>			None	None	None	None	No data	None	None	Bukovo Spring	No	<i>Niphargus stankoi</i>		<i>Niphargus stankoi</i>
<i>Niphargus velesensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Niphargus velesensis</i>	<i>Niphargus velesensis</i>
<i>Niphargus vodnensis banjus</i>			None	None	None	None	No data	None	None	Banjani Cave	No	<i>Niphargus vodnensis banjus</i>		<i>Niphargus vodnensis banjus</i>
<i>Niphargus vodnensis kosanini</i>			None	None	None	None	No data	None	None	Katlanovo Spring	No	<i>Niphargus vodnensis kosanini</i>		<i>Niphargus vodnensis kosanini</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Niphargus vodnensis vodnensis</i>			None	None	None	None	No data	None	None	Vodno Mt.	No		<i>Niphargus vodnensis vodnensis</i>	<i>Niphargus vodnensis vodnensis</i>
<i>Nitocrellopsis intermedia</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nitocrellopsis intermedia</i>	<i>Nitocrellopsis intermedia</i>
<i>Ochridacyclops arndti</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Ochridacyclops arndti</i>	<i>Ochridacyclops arndti</i>
<i>Ochridacyclops arndti prespensis</i>			None	None	None	None	No data	None	None	Lake Prespa	No		<i>Ochridacyclops arndti prespensis</i>	<i>Ochridacyclops arndti prespensis</i>
<i>Paralimnocythere alata</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Paralimnocythere alata</i>	<i>Paralimnocythere alata</i>
<i>Paralimnocythere diebeli</i>			None	None	None	None	No data	None	None	Skopje Valley	No		<i>Paralimnocythere diebeli</i>	<i>Paralimnocythere diebeli</i>
<i>Paralimnocythere georgevitschi</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Paralimnocythere georgevitschi</i>	<i>Paralimnocythere georgevitschi</i>
<i>Paralimnocythere karamani</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Paralimnocythere karamani</i>	<i>Paralimnocythere karamani</i>
<i>Paralimnocythere ochridense</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Paralimnocythere ochridense</i>	<i>Paralimnocythere ochridense</i>
<i>Paralimnocythere slavei</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Paralimnocythere slavei</i>	<i>Paralimnocythere slavei</i>
<i>Paralimnocythere umbonata</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Paralimnocythere umbonata</i>	<i>Paralimnocythere umbonata</i>
<i>Parastenocaris balcanica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Parastenocaris balcanica</i>	<i>Parastenocaris balcanica</i>
<i>Parastenocaris dubia</i>			None	None	None	None	No data	None	None	MKD	No		<i>Parastenocaris dubia</i>	<i>Parastenocaris dubia</i>
<i>Parastenocaris elegans</i>			None	None	None	None	No data	None	None	MKD	No		<i>Parastenocaris elegans</i>	<i>Parastenocaris elegans</i>
<i>Parastenocaris minutissimus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Parastenocaris minutissimus</i>	<i>Parastenocaris minutissimus</i>
<i>Parastenocaris mirabilis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Parastenocaris mirabilis</i>	<i>Parastenocaris mirabilis</i>
<i>Parastenocaris rascana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Parastenocaris rascana</i>	<i>Parastenocaris rascana</i>
<i>Parastenocaris similes f. macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Parastenocaris similes f. macedonica</i>	<i>Parastenocaris similes f. macedonica</i>
<i>Physocypria inversa</i>			None	None	None	None	No data	None	None	Lake Doyran	No		<i>Physocypria inversa</i>	<i>Physocypria inversa</i>
<i>Proasellus anophthalmus cf. anophthalmus</i>			None	None	None	None	No data	None	None	Shar Planina Mt.	No		<i>Proasellus anophthalmus cf. anophthalmus</i>	<i>Proasellus anophthalmus cf. anophthalmus</i>
<i>Proasellus anophthalmus radicanus</i>			None	None	None	None	No data	None	None	Radika Gorge	No		<i>Proasellus anophthalmus radicanus</i>	<i>Proasellus anophthalmus radicanus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Proasellus arnautovici</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Proasellus arnautovici</i>	<i>Proasellus arnautovici</i>
<i>Proasellus arnautovici elongates</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Proasellus arnautovici elongates</i>	<i>Proasellus arnautovici elongates</i>
<i>Proasellus gjorgjevici gjorgjevici</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Proasellus gjorgjevici gjorgjevici</i>	<i>Proasellus gjorgjevici gjorgjevici</i>
<i>Proasellus gjorgjevici litoralis</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Proasellus gjorgjevici litoralis</i>	<i>Proasellus gjorgjevici litoralis</i>
<i>Proasellus montenigrinum macedonicus</i>			None	None	None	None	No data	None	None	Kochani	No	<i>Proasellus montenigrinum macedonicus</i>		<i>Proasellus montenigrinum macedonicus</i>
<i>Proasellus nudus</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Proasellus nudus</i>	<i>Proasellus nudus</i>
<i>Proasellus remyi acutangulus</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Proasellus remyi acutangulus</i>	<i>Proasellus remyi acutangulus</i>
<i>Proasellus remyi remyi</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Proasellus remyi remyi</i>	<i>Proasellus remyi remyi</i>
<i>Psychrodromus peristericus</i>			None	None	None	None	No data	None	None	Pelister Springs	No	<i>Psychrodromus peristericus</i>		<i>Psychrodromus peristericus</i>
<i>Reidcypris trajani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Reidcypris trajani</i>	<i>Reidcypris trajani</i>
<i>Spelaecamptus incertus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Spelaecamptus incertus</i>	<i>Spelaecamptus incertus</i>
<i>Stygonitocrella karamani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Stygonitocrella karamani</i>	<i>Stygonitocrella karamani</i>
<i>Synurella longidactylus</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Synurella longidactylus</i>	<i>Synurella longidactylus</i>
<i>Typhlocypris puteana</i>			None	None	None	None	No data	None	None	MKD	No		<i>Typhlocypris puteana</i>	<i>Typhlocypris puteana</i>
<i>Typhlocypris slavei</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Typhlocypris slavei</i>	<i>Typhlocypris slavei</i>
<b>ARTHROPODS (Arthropoda) - Millipedes &amp; Centipedes (Myriapoda)</b>														
<i>Apfelbeckiella (Rhodopiella) beroni</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Brachydesmus (Brachydesmus) henrikenghoffi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Brachydesmus (Brachydesmus) henrikenghoffi</i>	<i>Brachydesmus (Brachydesmus) henrikenghoffi</i>
<i>Brachydesmus (Brachydesmus) herzegowinensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Brachydesmus (Brachydesmus) macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Brachydesmus (Brachydesmus) macedonicus</i>	<i>Brachydesmus (Brachydesmus) macedonicus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Brachydesmus (Brachydesmus) peristerensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Brachydesmus (Brachydesmus) peristerensis</i>	<i>Brachydesmus (Brachydesmus) peristerensis</i>
<i>Brachydesmus (Stylobrachydesmus) ljubotensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Chromatoiulus hamuligerus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Clinopodes polytrichus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Clinopodes skopljensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Clinopodes skopljensis</i>	<i>Clinopodes skopljensis</i>
<i>Clinopodes trebevicensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Eupolybothrus sketi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Eupolybothrus sketi</i>	<i>Eupolybothrus sketi</i>
<i>Glomeris balcanica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Insigniporus sturanyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Insigniporus sturanyi</i>	<i>Insigniporus sturanyi</i>
<i>Leptoiulus (Oroiulus) macedonicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Leptoiulus (Oroiulus) sarajevensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Leptoiulus (Oroiulus) storkani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Leptoiulus (Oroiulus) storkani</i>	<i>Leptoiulus (Oroiulus) storkani</i>
<i>Lithobius (Sigibius) burzenlandicus wardaranus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Lithobius (Sigibius) trebinjanus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Lithobius karamani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Lithobius karamani</i>	<i>Lithobius karamani</i>
<i>Megaphyllum crassum</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Megaphyllum dentatum</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Megaphyllum hercules</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Ochridaphe albanica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ochridaphe albanica</i>	<i>Ochridaphe albanica</i>
<i>Pachyiulus (Pachyiulus) cattarensis</i>			None	None	None	None	No data	None	None	Balkans	No			



Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Paeoniosoma faucium</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Polydesmus (Nomarchus) juergengruberi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Polydesmus (Nomarchus) juergengruberi</i>	<i>Polydesmus (Nomarchus) juergengruberi</i>
<i>Polydesmus (Nomarchus) renschi</i> Schubart			None	None	None	None	No data	None	None	Balkans	No			
<i>Polydesmus (Nomarchus) wardaranus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Polydesmus (Nomarchus) wardaranus</i>	<i>Polydesmus (Nomarchus) wardaranus</i>
<i>Polydesmus (Polydesmus) herzegowinensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Polydesmus (Polydesmus) jawlowskii</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Polyxenus macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Polyxenus macedonicus</i>	<i>Polyxenus macedonicus</i>
<i>Schizmohetera curcici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Schizmohetera curcici</i>	<i>Schizmohetera curcici</i>
<i>Schizmohetera sketi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Schizmohetera sketi</i>	<i>Schizmohetera sketi</i>
<i>Strigamia transsilvanica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Typhloglomeris ljubotensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Typhloglomeris varuna</i>			None	None	None	None	No data	None	None	MKD	No		<i>Typhloglomeris varuna</i>	<i>Typhloglomeris varuna</i>
<i>Typhloiulus (Typhloiulus) albanicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Typhloiulus (Typhloiulus) giganteus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Typhloiulus (Typhloiulus) giganteus</i>	<i>Typhloiulus (Typhloiulus) giganteus</i>
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Ametabolous Arthropods (Entognatha)</b>														
<i>Tomocerus skopjensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tomocerus skopjensis</i>	<i>Tomocerus skopjensis</i>
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Mayflies (Ephemeroptera)</b>														
<i>Baetis kozufensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Baetis kozufensis</i>	<i>Baetis kozufensis</i>
<i>Ecdyonurus macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ecdyonurus macedonicus</i>	<i>Ecdyonurus macedonicus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Ephemerella ikonovici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ephemerella ikonovici</i>	<i>Ephemerella ikonovici</i>
<i>Ephemerella maculocaudata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ephemerella maculocaudata</i>	<i>Ephemerella maculocaudata</i>
<i>Habrophlebia conjarensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Habrophlebia conjarensis</i>	<i>Habrophlebia conjarensis</i>
<i>Paraleptophlebia lacustris</i>			None	None	None	None	No data	None	None	MKD	No		<i>Paraleptophlebia lacustris</i>	<i>Paraleptophlebia lacustris</i>
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Dragonflies &amp; Damselflies (Odonata)</b>														
<i>Coenagrion ornatum</i>	Ornate Bluet	Samovilsko Konche	None	II	None	None	No data	None	None	No	No			
<i>Cordulegaster heros</i>	Large Golden-ringed Dragonfly	Planinski potochar	None	II/IV	None	None	NT	None	None	No	No			
<i>Leucorrhinia pectoralis</i>	Large White-faced Darter	Samovilsko Konche	None	II/IV	II	None	No data	None	None	No	No			
<i>Lindenia tetraphylla</i>	Bladetail	Samovilsko Konche	None	II/IV	II	None	VU	None	None	No	No		<i>Lindenia tetraphylla</i>	<i>Lindenia tetraphylla</i>
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Stoneflies (Plecoptera)</b>														
<i>Brachyptera macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Brachyptera macedonica</i>	<i>Brachyptera macedonica</i>
<i>Capnioneura balcanica macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Capnioneura balcanica macedonica</i>	<i>Capnioneura balcanica macedonica</i>
<i>Isoperla breviptera</i>			None	None	None	None	No data	None	None	MKD	No		<i>Isoperla breviptera</i>	<i>Isoperla breviptera</i>
<i>Isoperla vevčianensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Isoperla vevčianensis</i>	<i>Isoperla vevčianensis</i>
<i>Nemoura pelisteri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nemoura pelisteri</i>	<i>Nemoura pelisteri</i>
<i>Nemoura zwicki</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nemoura zwicki</i>	<i>Nemoura zwicki</i>
<i>Protonemura miačense</i>			None	None	None	None	No data	None	None	MKD	No		<i>Protonemura miačense</i>	<i>Protonemura miačense</i>
<i>Rhabdiopteryx doiranensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Rhabdiopteryx doiranensis</i>	<i>Rhabdiopteryx doiranensis</i>
<i>Taeniopteryx fusca</i>			None	None	None	None	No data	None	None	MKD	No		<i>Taeniopteryx fusca</i>	<i>Taeniopteryx fusca</i>
<i>Taeniopteryx stankovići</i>			None	None	None	None	No data	None	None	MKD	No		<i>Taeniopteryx stankovići</i>	<i>Taeniopteryx stankovići</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Grasshoppers &amp; Crickets (Orthoptera)</b>														
<i>Andreiniimon nuptialis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Andreiniimon nuptialis</i>	<i>Andreiniimon nuptialis</i>
<i>Metaplastes ornatus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Metrioptera knipperii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Metrioptera knipperii</i>	<i>Metrioptera knipperii</i>
<i>Metrioptera oblongicollis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Oropodisma macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Oropodisma macedonica</i>	<i>Oropodisma macedonica</i>
<i>Paracaloptenus caloptenoides</i>	Short-horned Grasshopper	Obichen Parakaloptenus	None	II/IV	None	None	No data	None	None	No	No			
<i>Pholidoptera aptera gjorgjevici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pholidoptera aptera gjorgjevici</i>	<i>Pholidoptera aptera gjorgjevici</i>
<i>Pholidoptera fallax</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Pholidoptera macedonica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Pholidoptera stankoi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pholidoptera stankoi</i>	<i>Pholidoptera stankoi</i>
<i>Platycleis ebneri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Platycleis macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Platycleis macedonica</i>	<i>Platycleis macedonica</i>
<i>Platycleis orina</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Poecilimon choparti</i>			None	None	None	None	No data	None	None	MKD	No		<i>Poecilimon choparti</i>	<i>Poecilimon choparti</i>
<i>Poecilimon jonicus jonicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Poecilimon macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Poecilimon macedonicus</i>	<i>Poecilimon macedonicus</i>
<i>Poecilimon mavrovi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Poecilimon mavrovi</i>	<i>Poecilimon mavrovi</i>
<i>Poecilimon pancici</i>			None	None	None	None	No data	None	None	MKD	No		<i>Poecilimon pancici</i>	<i>Poecilimon pancici</i>
<i>Poecilimon vodnensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Poecilimon vodnensis</i>	<i>Poecilimon vodnensis</i>
<i>Saga pedo</i>	Predatory Bush Cricket	Saga	None	IV	II	None	VU	None	None	No	No		<i>Saga pedo</i>	<i>Saga pedo</i>
<i>Troglophilus lazarepilensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Troglophilus lazarepilensis</i>	<i>Troglophilus lazarepilensis</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Booklice &amp; Barklice (Psocoptera)</b>														
<i>Liposcelis macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Liposcelis macedonicus</i>	<i>Liposcelis macedonicus</i>
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Caddisflies (Trichoptera)</b>														
<i>Adicella balcanica</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Adicella dionisos</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Adicella eucharis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Agapetus belareca</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Beraea zawadil</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Beraeamyia aphyrte</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Beraeamyia kutsaftikii</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Calamoceras illiesi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Chaetopteryx bosniaca</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Chaetopteryx stankovici</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Drusus plicatus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Drusus plicatus</i>	<i>Drusus plicatus</i>
<i>Helicopsyche megalochari</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Hydropsyche peristerica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Hydropsyche peristerica</i>	<i>Hydropsyche peristerica</i>
<i>Lasiocephala doehleri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Limnephilus petri</i>			None	None	None	None	No data	None	None	Shar Planina	No		<i>Limnephilus petri</i>	<i>Limnephilus petri</i>
<i>Notidobia melanoptera</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Notidobia nekibe</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Oecismus mucidus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Phryganea ochrida</i>			None	None	None	None	No data	None	None	Lake Ohrid	No		<i>Phryganea ochrida</i>	<i>Phryganea ochrida</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Potamophylax goulandrionum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Potamophylax goulandrionum</i>	<i>Potamophylax goulandrionum</i>
<i>Psilopteryx montana</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Rhadicoleptus alpestris macedonicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Rhyacophila trescavicensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Schizopelex huettingeri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Sericostoma bergeri</i>			None	None	None	None	No data	None	None	Balkans	No			
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - True Flies (Diptera)</b>														
<i>Cheilosia melanura rubra</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cheilosia melanura rubra</i>	<i>Cheilosia melanura rubra</i>
<i>Chrysogaster mediterraneus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chrysogaster mediterraneus</i>	<i>Chrysogaster mediterraneus</i>
<i>Merodon albonigrum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Merodon albonigrum</i>	<i>Merodon albonigrum</i>
<i>Merodon recurvus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Merodon recurvus</i>	<i>Merodon recurvus</i>
<i>Psarus abdominalis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Psarus abdominalis</i>	<i>Psarus abdominalis</i>
<i>Sphegina sublatifrons</i>			None	None	None	None	No data	None	None	MKD	No		<i>Sphegina sublatifrons</i>	<i>Sphegina sublatifrons</i>
<i>Thaumalea macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Thaumalea macedonica</i>	<i>Thaumalea macedonica</i>
<i>Wiedemannia macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Wiedemannia macedonica</i>	<i>Wiedemannia macedonica</i>
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Beetles (Coleoptera) - Ground Beetles (Carabidae)</b>														
<i>Callistenes relictum</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Carabus hortensis neumeyeri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Carabus cavernosus sterbai</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Carabus intricatus macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Carabus intricatus macedonicus</i>	<i>Carabus intricatus macedonicus</i>
<i>Carabus intricatus montenegrinus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Carabus caelatus malissorum</i>			None	None	None	None	No data	None	None	Balkans	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Carabus croaticus droveniki</i>			None	None	None	None	No data	None	None	MKD	No		<i>Carabus croaticus droveniki</i>	<i>Carabus croaticus droveniki</i>
<i>Carabus croaticus ljibetensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Carabus violaceus skombrosensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Carabus violaceus skombrosensis</i>	<i>Carabus violaceus skombrosensis</i>
<i>Carabus violaceus shardaghensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Carabus violaceus marani</i>			None	None	None	None	No data	None	None	MKD	No		<i>Carabus violaceus marani</i>	<i>Carabus violaceus marani</i>
<i>Carabus coriaceus weratherianus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Cychrus attenuatus peristericus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cychrus attenuatus peristericus</i>	<i>Cychrus attenuatus peristericus</i>
<i>Cychrus semigranosus jacupicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cychrus semigranosus jacupicensis</i>	<i>Cychrus semigranosus jacupicensis</i>
<i>Cychrus semigranosus montenegrinus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Cychrus semigranosus peristericus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cychrus semigranosus peristericus</i>	<i>Cychrus semigranosus peristericus</i>
<i>Nebria aetolica galicica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nebria aetolica galicica</i>	<i>Nebria aetolica galicica</i>
<i>Nebria aetolica kaimakcalensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nebria aetolica kaimakcalensis</i>	<i>Nebria aetolica kaimakcalensis</i>
<i>Nebria aetolica korabica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nebria aetolica korabica</i>	<i>Nebria aetolica korabica</i>
<i>Nebria aetolica peristerica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nebria aetolica peristerica</i>	<i>Nebria aetolica peristerica</i>
<i>Nebria aetolica rambouseki</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nebria aetolica rambouseki</i>	<i>Nebria aetolica rambouseki</i>
<i>Nebria attemsi</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Nebria ganglbaueri ganglbaueri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Nebria ganglbaueri matejkai</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nebria ganglbaueri matejkai</i>	<i>Nebria ganglbaueri matejkai</i>
<i>Nebria macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Nebria macedonica</i>	<i>Nebria macedonica</i>
<i>Trechus cardioderus golesnicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trechus cardioderus golesnicensis</i>	<i>Trechus cardioderus golesnicensis</i>
<i>Trechus goebli goebli</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trechus goebli goebli</i>	<i>Trechus goebli goebli</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Trechus goebli matchai</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trechus goebli matchai</i>	<i>Trechus goebli matchai</i>
<i>Trechus hajeki</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trechus hajeki</i>	<i>Trechus hajeki</i>
<i>Trechus kombingeri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Trechus midas</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trechus midas</i>	<i>Trechus midas</i>
<i>Trechus pachycerus pachycerus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trechus pachycerus pachycerus</i>	<i>Trechus pachycerus pachycerus</i>
<i>Trechus pachycerus jacupicaensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trechus pachycerus jacupicaensis</i>	<i>Trechus pachycerus jacupicaensis</i>
<i>Trechus priapus priapus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Trechus subnotatus ljubetensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trechus subnotatus ljubetensis</i>	<i>Trechus subnotatus ljubetensis</i>
<i>Trechus thessalonicus J</i>			None	None	None	None	No data	None	None	MKD	No		<i>Trechus thessalonicus</i>	<i>Trechus thessalonicus</i>
<i>Paradeltomerus paradoxus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Paradeltomerus paradoxus</i>	<i>Paradeltomerus paradoxus</i>
<i>Duvalius peristericus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Duvalius peristericus</i>	<i>Duvalius peristericus</i>
<i>Duvalius gogalai</i>			None	None	None	None	No data	None	None	MKD	No		<i>Duvalius gogalai</i>	<i>Duvalius gogalai</i>
<i>Duvalius macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Duvalius macedonicus</i>	<i>Duvalius macedonicus</i>
<i>Okuloduvalius fodori</i>			None	None	None	None	No data	None	None	MKD	No		<i>Okuloduvalius fodori</i>	<i>Okuloduvalius fodori</i>
<i>Duvalius strupii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Duvalius strupii</i>	<i>Duvalius strupii</i>
<i>Duvalius vignai</i>			None	None	None	None	No data	None	None	MKD	No		<i>Duvalius vignai</i>	<i>Duvalius vignai</i>
<i>Deltomerus sterbai</i>			None	None	None	None	No data	None	None	MKD	No		<i>Deltomerus sterbai</i>	<i>Deltomerus sterbai</i>
<i>Deltomerus paradoxus paradoxus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Paradeltomerus paradoxus korabensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Paradeltomerus paradoxus korabensis</i>	<i>Paradeltomerus paradoxus korabensis</i>
<i>Pachycarus macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pachycarus macedonicus</i>	<i>Pachycarus macedonicus</i>
<i>Myas chalybaeus</i>			None	None	None	None	No data	None	None	Balkans	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Pterostichus macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pterostichus macedonicus</i>	<i>Pterostichus macedonicus</i>
<i>Pterostichus ottomanus ottomanus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Pterostichus ottomanus kajmakcalensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pterostichus ottomanus kajmakcalensis</i>	<i>Pterostichus ottomanus kajmakcalensis</i>
<i>Pterostichus lumensis litae</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Pterostichus lumensis ljubetensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tapinopterus balcanicus belasicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tapinopterus balcanicus belasicensis</i>	<i>Tapinopterus balcanicus belasicensis</i>
<i>Tapinopterus comita</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tapinopterus comita</i>	<i>Tapinopterus comita</i>
<i>Tapinopterus dochii</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tapinopterus dochii</i>	<i>Tapinopterus dochii</i>
<i>Tapinopterus heyrovskyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tapinopterus heyrovskyi</i>	<i>Tapinopterus heyrovskyi</i>
<i>Tapinopterus miridita miridita</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Tapinopterus miridita jablanicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tapinopterus miridita jablanicensis</i>	<i>Tapinopterus miridita jablanicensis</i>
<i>Tapinopterus jakupicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tapinopterus jakupicensis</i>	<i>Tapinopterus jakupicensis</i>
<i>Tapinopterus monastirensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tapinopterus monastirensis</i>	<i>Tapinopterus monastirensis</i>
<i>Tapinopterus purkynei</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tapinopterus purkynei</i>	<i>Tapinopterus purkynei</i>
<i>Tapinopterus rambousekianus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Tapinopterus rambousekianus</i>	<i>Tapinopterus rambousekianus</i>
<i>Molops alpestris imitator</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Molops dilatatus dilatatus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Molops matchai</i>			None	None	None	None	No data	None	None	MKD	No		<i>Molops matchai</i>	<i>Molops matchai</i>
<i>Molops rufipes rufipes</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Molops rufipes belasicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Molops rufipes belasicensis</i>	<i>Molops rufipes belasicensis</i>
<i>Molops rufipes jakupicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Molops rufipes jakupicensis</i>	<i>Molops rufipes jakupicensis</i>



Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Molops osmanilis osmanilis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Molops osmanilis osmanilis</i>	<i>Molops osmanilis osmanilis</i>
<i>Molops pseudoosmanilis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Molops pseudoosmanilis</i>	<i>Molops pseudoosmanilis</i>
<i>Molops rufipes steindachneri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Molops rufipes sturanyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Molops rufipes sturanyi</i>	<i>Molops rufipes sturanyi</i>
<i>Molops weiratheri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Molops piceus balcanicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Omphreus gracilis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Omphreus albanicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Calathus albanicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Calathus glabricollis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Calathus macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Calathus macedonicus</i>	<i>Calathus macedonicus</i>
<i>Calathus purkynei</i>			None	None	None	None	No data	None	None	MKD	No		<i>Calathus purkynei</i>	<i>Calathus purkynei</i>
<i>Synuchidius ganglbaueri</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Harpalus triseriatus babunensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Harpalus triseriatus babunensis</i>	<i>Harpalus triseriatus babunensis</i>
<i>Zabrus aetolus purkynei</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zabrus aetolus purkynei</i>	<i>Zabrus aetolus purkynei</i>
<i>Zabrus albanicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Zabrus albanicus albanicus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Zabrus albanicus jablanicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zabrus albanicus jablanicensis</i>	<i>Zabrus albanicus jablanicensis</i>
<i>Zabrus albanicus jakupicensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zabrus albanicus jakupicensis</i>	<i>Zabrus albanicus jakupicensis</i>
<i>Zabrus balcanicus rhodopensis</i>			None	None	None	None	No data	None	None	Balkans	No			
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Beetles (Coleoptera) - Weevils (Curculionidae)</b>														
<i>Bolbelasmus unicornis</i>	Dung-beetle	Bumbar Lepeshkar	None	II/IV	None	None	No data	None	None	No	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Buprestis splendens</i>	Goldstreifiger	Zlatest Trkach	None	II/IV	II	None	EN	None	None	No	No	<i>Buprestis splendens</i>		<i>Buprestis splendens</i>
<i>Cerambyx cerdo</i>	Great Capricorn Beetle	Golema Dabova Strizhibuba	None	II/IV	II	None	VU	None	None	No	No		<i>Cerambyx cerdo</i>	<i>Cerambyx cerdo</i>
<i>Lucanus cervus</i>	Stag Beetle	Elenche	None	II	III	None	No data	None	None	No	No			
<i>Morimus funereus</i>	Long-horned Beetle	Damchesta Strizhibuba	None	II	None	None	VU	None	None	No	No		<i>Morimus funereus</i>	<i>Morimus funereus</i>
<i>Osmoderma eremita</i>	Hermit Beetle		None	II/IV	II	None	NT	None	None	No	No			
<i>Otiorhynchus rambouseki</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Otiorhynchus wernerianus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus wernerianus</i>	<i>Otiorhynchus wernerianus</i>
<i>Otiorhynchus coptocnemis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus coptocnemis</i>	<i>Otiorhynchus coptocnemis</i>
<i>Otiorhynchus liliputanus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus liliputanus</i>	<i>Otiorhynchus liliputanus</i>
<i>Otiorhynchus macedonicus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus macedonicus</i>	<i>Otiorhynchus macedonicus</i>
<i>Otiorhynchus marmota kajmakcelensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus marmota kajmakcelensis</i>	<i>Otiorhynchus marmota kajmakcelensis</i>
<i>Otiorhynchus midas</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus midas</i>	<i>Otiorhynchus midas</i>
<i>Otiorhynchus pierinus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus pierinus</i>	<i>Otiorhynchus pierinus</i>
<i>Otiorhynchus plagiator</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus plagiator</i>	<i>Otiorhynchus plagiator</i>
<i>Otiorhynchus politus a regliae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus politus a regliae</i>	<i>Otiorhynchus politus a regliae</i>
<i>Otiorhynchus shardagensis arammichoides</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus shardagensis arammichoides</i>	<i>Otiorhynchus shardagensis arammichoides</i>
<i>Otiorhynchus sorbivorus</i>			None	None	None	None	No data	None	None	MKD	No		<i>Otiorhynchus sorbivorus</i>	<i>Otiorhynchus sorbivorus</i>
<i>Phyllobius contemptus</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Phyllobius lateralis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Phyllobius pilicornis</i>			None	None	None	None	No data	None	None	Balkans	No			
<i>Rosalia alpina</i>	Alpine Longhorn Beetle	Alpska strizhibuba	None	II/IV	II	None	VU	None	None	No	No		<i>Rosalia alpina</i>	<i>Rosalia alpina</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<b>ARTHROPODS (Arthropoda) - Hexapods (Hexapoda) - Moths &amp; Butterflies (Lepidoptera)</b>														
<i>Aciptilia ivae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aciptilia ivae</i>	<i>Aciptilia ivae</i>
<i>Acrolepia heringi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Acrolepia heringi</i>	<i>Acrolepia heringi</i>
<i>Acrolepia macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Acrolepia macedonica</i>	<i>Acrolepia macedonica</i>
<i>Acrolepia wolfschlägeri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Acrolepia wolfschlägeri</i>	<i>Acrolepia wolfschlägeri</i>
<i>Aethes kasyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Aethes kasyi</i>	<i>Aethes kasyi</i>
<i>Agonopteryx (Depressaria) thurneri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Agonopteryx (Depressaria) thurneri</i>	<i>Agonopteryx (Depressaria) thurneri</i>
<i>Agrochola (Orthosia) thurneri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Agrochola (Orthosia) thurneri</i>	<i>Agrochola (Orthosia) thurneri</i>
<i>Agrochola (Orthosia) wolfschlägeri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Agrochola (Orthosia) wolfschlägeri</i>	<i>Agrochola (Orthosia) wolfschlägeri</i>
<i>Argyresthia kasyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Argyresthia kasyi</i>	<i>Argyresthia kasyi</i>
<i>Bankesia macedoniella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Bankesia macedoniella</i>	<i>Bankesia macedoniella</i>
<i>Bucculatrix pseudosylvella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Bucculatrix pseudosylvella</i>	<i>Bucculatrix pseudosylvella</i>
<i>Bucculatrix species</i>			None	None	None	None	No data	None	None	MKD	No		<i>Bucculatrix species</i>	<i>Bucculatrix species</i>
<i>Calostigia wofschlagerae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Calostigia wofschlagerae</i>	<i>Calostigia wofschlagerae</i>
<i>Caryocolum (Phthorimaea, Lita) xuthellum</i>			None	None	None	None	No data	None	None	MKD	No		<i>Caryocolum (Phthorimaea, Lita) xuthellum</i>	<i>Caryocolum (Phthorimaea, Lita) xuthellum</i>
<i>Chamaesphecia balcanica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chamaesphecia balcanica</i>	<i>Chamaesphecia balcanica</i>
<i>Chesias pinkeri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Chesias pinkeri</i>	<i>Chesias pinkeri</i>
<i>Cnephasia klimeschi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cnephasia klimeschi</i>	<i>Cnephasia klimeschi</i>
<i>Coleophora caortataephaga</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora caortataephaga</i>	<i>Coleophora caortataephaga</i>
<i>Coleophora depunctella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora depunctella</i>	<i>Coleophora depunctella</i>
<i>Coleophora flavescens</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora flavescens</i>	<i>Coleophora flavescens</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Coleophora gigantella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora gigantella</i>	<i>Coleophora gigantella</i>
<i>Coleophora kasyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora kasyi</i>	<i>Coleophora kasyi</i>
<i>Coleophora latilineella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora latilineella</i>	<i>Coleophora latilineella</i>
<i>Coleophora macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora macedonica</i>	<i>Coleophora macedonica</i>
<i>Coleophora medicagivora</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora medicagivora</i>	<i>Coleophora medicagivora</i>
<i>Coleophora quadristraminella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora quadristraminella</i>	<i>Coleophora quadristraminella</i>
<i>Coleophora scabrida</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora scabrida</i>	<i>Coleophora scabrida</i>
<i>Coleophora species</i>			None	None	None	None	No data	None	None	MKD	No		<i>Coleophora species</i>	<i>Coleophora species</i>
<i>Copiphana (Cleophana) lunaki</i>			None	None	None	None	No data	None	None	MKD	No		<i>Copiphana (Cleophana) lunaki</i>	<i>Copiphana (Cleophana) lunaki</i>
<i>Cosmia rhodopsis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cosmia rhodopsis</i>	<i>Cosmia rhodopsis</i>
<i>Cryphia (Bryophila) seladona burgeffi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Cryphia (Bryophila) seladona burgeffi</i>	<i>Cryphia (Bryophila) seladona burgeffi</i>
<i>Ephysteris treskensis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Ephysteris treskensis</i>	<i>Ephysteris treskensis</i>
<i>Eremica (Symmoca) kasyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Eremica (Symmoca) kasyi</i>	<i>Eremica (Symmoca) kasyi</i>
<i>Eriogaster lanestris macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Eriogaster lanestris macedonica</i>	<i>Eriogaster lanestris macedonica</i>
<i>Euchalcia (Plusia) chlorocharis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Euchalcia (Plusia) chlorocharis</i>	<i>Euchalcia (Plusia) chlorocharis</i>
<i>Euphitecia ochridata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Euphitecia ochridata</i>	<i>Euphitecia ochridata</i>
<i>Euphitecia thurnerata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Euphitecia thurnerata</i>	<i>Euphitecia thurnerata</i>
<i>Euphydryas aurinia</i>	Marsh Fritillary	Mochurishen Sharanec	None	II	II	None	No data	None	None	No	No			
<i>Euproctis rivularis dannehli</i>			None	None	None	None	No data	None	None	MKD	No		<i>Euproctis rivularis dannehli</i>	<i>Euproctis rivularis dannehli</i>
<i>Gnophos pentheri petrina</i>			None	None	None	None	No data	None	None	MKD	No		<i>Gnophos pentheri petrina</i>	<i>Gnophos pentheri petrina</i>
<i>Hadena (Dianthoecia) clara macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Hadena (Dianthoecia) clara macedonica</i>	<i>Hadena (Dianthoecia) clara macedonica</i>
<i>Infurcitinea kasyi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Infurcitinea kasyi</i>	<i>Infurcitinea kasyi</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Infurcitinea ochridella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Infurcitinea ochridella</i>	<i>Infurcitinea ochridella</i>
<i>Kessleria macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Kessleria macedonica</i>	<i>Kessleria macedonica</i>
<i>Licaena dispar</i>	Large Copper	Golem Bakarec	None	II/IV	II	None	NT	None	None	No	No			
<i>Maculinea arion</i>	Large Blue	Krupno-damchest Sinec	None	IV	II	None	EN	None	None	No	No	<i>Maculinea arion</i>		<i>Maculinea arion</i>
<i>Neurothaumasia macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Neurothaumasia macedonica</i>	<i>Neurothaumasia macedonica</i>
<i>Obesoceras forsteri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Obesoceras forsteri</i>	<i>Obesoceras forsteri</i>
<i>Pantacordis (Eremica) pantsa</i>			None	None	None	None	No data	None	None	MKD	No		<i>Pantacordis (Eremica) pantsa</i>	<i>Pantacordis (Eremica) pantsa</i>
<i>Papilio alexanor</i>	Southern Swallowtail	Aeksandrov Edrilec	None	IV	II	None	No data	None	None	No	No			
<i>Parachronistis lunaki</i>			None	None	None	None	No data	None	None	MKD	No		<i>Parachronistis lunaki</i>	<i>Parachronistis lunaki</i>
<i>Parnassius apollo</i>	Mountain Apollo	Apolonova Peperutka	None	IV	II	None	VU	II	A	No	No	<i>Parnassius apollo</i>		<i>Parnassius apollo</i>
<i>Parnassius mnemosyne</i>	Clouded Apollo	Lazhna Apolonva Peperutka	None	IV	II	None	NT	None	None	No	No			
<i>Polyommatus eroides</i>	False Eros Blue	Balkanski Sinec	None	II/IV	None	None	No data	None	None	No	No			
<i>Porphyria (Thalpoares, Eublemma) thurneri</i>			None	None	None	None	No data	None	None	MKD	No		<i>Porphyria (Thalpoares, Eublemma) thurneri</i>	<i>Porphyria (Thalpoares, Eublemma) thurneri</i>
<i>Pseudochazara cingovskii</i>			None	None	None	None	CR	None	None	No	No	<i>Pseudochazara cingovskii</i>		<i>Pseudochazara cingovskii</i>
<i>Rebelia macedonica</i>			None	None	None	None	No data	None	None	MKD	No		<i>Rebelia macedonica</i>	<i>Rebelia macedonica</i>
<i>Scythris albostriata</i>			None	None	None	None	No data	None	None	MKD	No		<i>Scythris albostriata</i>	<i>Scythris albostriata</i>
<i>Scythris crypta</i>			None	None	None	None	No data	None	None	MKD	No		<i>Scythris crypta</i>	<i>Scythris crypta</i>
<i>Scythris similes</i>			None	None	None	None	No data	None	None	MKD	No		<i>Scythris similes</i>	<i>Scythris similes</i>
<i>Scythris subschleichiella</i>			None	None	None	None	No data	None	None	MKD	No		<i>Scythris subschleichiella</i>	<i>Scythris subschleichiella</i>
<i>Stagmatophora klimeschi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Stagmatophora klimeschi</i>	<i>Stagmatophora klimeschi</i>
<i>Stigmella (Nepticula) globulariae</i>			None	None	None	None	No data	None	None	MKD	No		<i>Stigmella (Nepticula) globulariae</i>	<i>Stigmella (Nepticula) globulariae</i>
<i>Teleiopsis species</i>			None	None	None	None	No data	None	None	MKD	No		<i>Teleiopsis species</i>	<i>Teleiopsis species</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Zerynthia polyxena</i>	Southern Festoon	Juzhno Veligidenche	None	IV	II	None	LC	None	None	No	No			
<i>Zygaena (Cisiphaga) brizae ochrida</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zygaena (Cisiphaga) brizae ochrida</i>	<i>Zygaena (Cisiphaga) brizae ochrida</i>
<i>Zygaena (Hesychia) laeta orientis</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zygaena (Hesychia) laeta orientis</i>	<i>Zygaena (Hesychia) laeta orientis</i>
<i>Zygaena (Lictoria) achilleae winneguthi</i>			None	None	None	None	No data	None	None	MKD	No		<i>Zygaena (Lictoria) achilleae winneguthi</i>	<i>Zygaena (Lictoria) achilleae winneguthi</i>
<b>VERTEBRATES (VERTEBRATA)</b>														
<b>FISHES (Pisces)</b>														
<i>Acipenser sturio</i>	Atlantic Sturgeon	Atlantska Esetra	None	II/IV	II	I/II	CR	I	A	No	Yes	<i>Acipenser sturio</i>		<i>Acipenser sturio</i>
<i>Alburnoides ohridanus</i>	Ohrid Spirin	Ohridska Gomnushka, Shlunec	None	None	None	None	VU	None	None	Lake Ohrid	No		<i>Alburnoides ohridanus</i>	<i>Alburnoides ohridanus</i>
<i>Alburnoides prespensis</i>	Prespa Spirin	Prespanska Gomnushka	None	None	None	None	VU	None	None	Lake Prespa	No		<i>Alburnoides prespensis</i>	<i>Alburnoides prespensis</i>
<i>Alburnus belvica</i>	Prespa Bleak	Prespanska Plashica, Nivichka	None	None	None	None	VU	None	None	Lake Prespa	Yes		<i>Alburnus belvica</i>	<i>Alburnus belvica</i>
<i>Alburnus macedonicus</i>	Doiran Bleak	Dojranska Plashica	None	None	None	None	CR	None	None	Lake Doyran	No	<i>Alburnus macedonicus</i>		<i>Alburnus macedonicus</i>
<i>Alburnus scoranza</i>	Scoranza	Ohridska Plashica	None	None	None	None	LC	None	None	Lakes Ohrid & Skadar	No			
<i>Alburnus thessalicus</i>	Thessaly Bleak	Vardarska Plashica	None	None	None	None	LC	None	None	Vardar & Strumica /Struma Watersheds	No			
<i>Alosa fallax</i>	Twaite Shad	Haringa; Lojka; Kubla	None	II	III	None	LC	None	None	No	Yes			
<i>Anguilla anguilla</i>	European Eel	Jagula	None	None	None	None	CR	None	None	No	No	<i>Anguilla anguilla</i>		<i>Anguilla anguilla</i>
<i>Barbatula sturanyi</i>	Ohrid Stone Loach	Ohridska Vretenushka	None	None	None	None	LC	None	None	Upper River Drim Watershed	No			
<i>Barbus balcanicus</i>	Large Spot Barbel	Crna Mrena, Meka Mrena	None	None	None	None	LC	None	None	From Slovenia to Greece	No			
<i>Barbus macedonicus</i>	Macedonian Barbel	Bela Mrena	None	None	None	None	DD	None	None	Rivers Vardar & Aliakmon Watersheds	No			
<i>Barbus prespensis</i>	Prespa Barbel	Prespanska Mrena	None	None	None	None	VU	None	None	Lake Prespa	Yes		<i>Barbus prespensis</i>	<i>Barbus prespensis</i>
<i>Barbus rebeli</i>	Western Balkan Barbel	Ohridska Mrena	None	None	None	None	LC	None	None	Lakes Ohrid & Skadar; River Drim	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Convention	Bonn Convention	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Barbus strumicae</i>	Strumica Barbel	Strumichka Mrena	None	None	None	None	LC	None	None	Strumica/Struma Watershed	No			
<i>Chondrostoma ohridanus</i>	Ohrid Nase	Ohridski Skobust	None	None	None	None	LC	None	None	Lake Ohrid	No			
<i>Chondrostoma prespense</i>	Prespa Nase	Prespanski Skobust	None	None	None	None	VU	None	None	Lake Prespa	Yes		<i>Chondrostoma prespense</i>	<i>Chondrostoma prespense</i>
<i>Chondrostoma vardarensis</i>	Vardar Nase	Vardarski Skobust, Bojnik	None	None	None	None	NT	None	None	Vardar, Struma & Maritza Watersheds	No			
<i>Cobitis meridionalis</i>	Prespa Spined Loach	Prespanska Shtipalka	None	None	None	None	VU	None	None	Lake Prespa	Yes		<i>Cobitis meridionalis</i>	<i>Cobitis meridionalis</i>
<i>Cobitis ohridana</i>	Ohrid Spined Loach	Ohridska Shtipalka	None	None	None	None	LC	None	None	River Drim Watershed	No			
<i>Cobitis strumicae</i>	Struma Spined Loach	Strumichka Shtipalka	None	None	None	None	LC	None	None	River Strumitza/Struma Watershed	No			
<i>Cobitis vardarensis</i>	Vardar Spined Loach	Vardarska Shtipalka	None	None	None	None	LC	None	None	River Vardar Watershed	No			
<i>Cottus gobio</i>	Sculpin	Pesh	None	II	None	None	LC	None	None	No	No			
<i>Cyprinus carpio</i>	Carp	Krap, Sharan	None	None	None	None	VU	None	None	No	Yes		<i>Cyprinus carpio</i>	<i>Cyprinus carpio</i>
<i>Eudontomyzon mariae</i>	Ukrainian Brook Lamprey	Zmiorka	None	II	III	None	LC	None	None	No	No			
<i>Eudontomyzon stankokaramani</i>	Drim Brook Lamprey	Drimska Zmiorka	None	II	None	None	LC	None	None	River Drim Watershed	Yes		<i>Eudontomyzon stankokaramani</i>	<i>Eudontomyzon stankokaramani</i>
<i>Gobio bulgaricus</i>	Aegean Gudgeon	Krkushka	None	None	None	None	LC	None	None	Vardar, Struma & Maritza Watersheds	No			
<i>Gobio ohridanus</i>	Ohrid Gudgeon	Ohridska Krkushka; Mrenec	None	None	None	None	VU	None	None	Lake Ohrid	No		<i>Gobio ohridanus</i>	<i>Gobio ohridanus</i>
<i>Oxynoemacheilus bureschi</i>	Struma Stone Loach	Strumichka Vretenushka	None	None	None	None	LC	None	None	River Strumitza/Struma Watershed	Yes			
<i>Pachychilon macedonicum</i>	Mavrotsironi	Mergur	None	None	None	None	DD	None	None	Vardar, Pinios & Aliakmon Watersheds	No			
<i>Pachychilon pictum</i>	Moranec	Moranec	None	None	III	None	LC	None	None	River Drim Watershed	No			
<i>Pelagus minutus</i>	Ohrid Minnow	Ohridsko Grunche	None	II	None	None	DD	None	None	Lakes Ohrid & Skadar	Yes			
<i>Pelagus prespensis</i>	Prespa Minnow	Prespansko Grunche	None	II	None	None	EN	None	None	Lake Prespa	Yes	<i>Pelagus prespensis</i>		<i>Pelagus prespensis</i>
<i>Rhodeus amarus</i>	Bitterling	Platice; Plaskun; Ploska	None	II	III	None	LC	None	None	No	No			
<i>Rhodeus meridionalis</i>	Vardar Bitterling	Vardarsko Platice	None	None	None	None	LC	None	None	River Vardar Watershed	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Romanogobio elimeius</i>	Greek Stone Gudgeon	Tenkoopashesta Krkushka	None	None	None	None	LC	None	None	Rivers Vardar & Pinios Watersheds	No		<i>Romanogobio elimeius</i>	<i>Romanogobio elimeius</i>
<i>Romanogobio kessleri</i>	Kessler's Gudgeon	Keslerova Krkushka	None	II	III	None	LC	None	None	No	No			
<i>Romanogobio uranoscopus</i>	Danube Gudgeon	Dunavska Krkushka	None	II	III	None	LC	None	None	No	No			
<i>Rutilus karamani</i>	Albanian Roach	Drimski Grunec	None	None	None	None	LC	None	None	River Drim Watershed	Yes			
<i>Rutilus ohridanus</i>	Ohrid Roach	Ohridski Grunec	None	None	None	None	LC	None	None	Lakes Ohrid & Skadar	Yes			
<i>Rutilus prespensis</i>	Prespa Roach	Prespanski Grunec	None	None	None	None	VU	None	None	Lake Prespa	Yes		<i>Rutilus prespensis</i>	<i>Rutilus prespensis</i>
<i>Sabanejewia balcanica</i>	Balkan Golden Loach	Zlatna Shtipalka, Kasalka, Cijak	None	II	III	None	LC	None	None	No	Yes			
<i>Salaria fluviatilis</i>	Freshwater Blenny	Kamenjarche, Bapka	None	None	None	None	LC	None	None	No	Yes			
<i>Salmo aphelios</i>	Summer Trout, Letnica	Letna Pastrmka, Letnica	None	None	None	None	EN	None	None	Lake Ohrid	Yes	<i>Salmo aphelios</i>		<i>Salmo aphelios</i>
<i>Salmo balcanicus</i>	Struga Trout, Kresnica	Strushka Pastrmka, Kresnica	None	None	None	None	DD	None	None	Lake Ohrid	Yes			
<i>Salmo dentex</i>	Zubatac	Zapadnobalkanska Pastrmka	None	None	None	None	DD	None	None	SW Balkan	Yes			
<i>Salmo farioides</i>	Balkan Brook Trout	Radichka Pastrmka	None	None	None	None	NT	None	None	SW Balkan	No			
<i>Salmo letnica</i>	Peshtani Trout	Peshtanska Pastrmka	None	None	None	None	DD	None	None	Lake Ohrid	Yes			
<i>Salmo lumi</i>	Lumi Trout	Ohridska Potochna Pastrmka	None	None	None	None	DD	None	None	Lake Ohrid Watershed	Yes			
<i>Salmo macedonicus</i>	Macedonian Trout	Makedonska Pastrmka	None	None	None	None	DD	None	None	Upper River Vardar Watershed	No			
<i>Salmo marmoratus</i>	Marbled Trout	Mramorna Pastrmka	None	II	None	None	LC	None	None	No	Yes			
<i>Salmo ohridanus</i>	Belvica	Belvica, Mekousna Pastrmka	None	None	None	None	VU	None	None	Lake Ohrid	Yes		<i>Salmo ohridanus</i>	<i>Salmo ohridanus</i>
<i>Salmo pelagonicus</i>	Pelagos Trout	Pelagoniska Pastrmka	None	None	None	None	VU	None	None	River Crna Reka Watershed	Yes		<i>Salmo pelagonicus</i>	<i>Salmo pelagonicus</i>
<i>Salmo peristericus</i>	Prespa Trout	Prespanska Potochna Pastrmka	None	None	None	None	EN	None	None	Lake Prespa Watershed	Yes	<i>Salmo peristericus</i>		<i>Salmo peristericus</i>
<i>Scardinius knezevici</i>	Skadar Rudd	Ohridska Pisa	None	None	None	None	VU	None	None	Lakes Ohrid & Skadar	No		<i>Scardinius knezevici</i>	<i>Scardinius knezevici</i>



Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Squalius orpheus</i>	Maritza Chub	Strumichki Klen	None	None	None	None	LC	None	None	Rivers Strumitza/Struma & Maritza Watersheds	No			
<i>Squalius prespensis</i>	Prespa Chub	Prespanski Klen	None	None	None	None	LC	None	None	Lake Prespa	No			
<i>Squalius vardarensis</i>	Vardar Chub	Vardarski Klen	None	None	None	None	LC	None	None	River Vardar Watershed	No			
<i>Vimba melanops</i>	Dark Vimba	Popadika	None	None	None	None	DD	None	None	South Balkan	Yes			
<i>Zingel balcanicus</i>	Vretenar	Vretenar	None	II	None	None	DD	None	None	Upper River Vardar Watershed	Yes		<i>Zingel balcanicus</i>	<i>Zingel balcanicus</i>
<b>AMPHIBIANS (Amphibia)</b>														
<i>Bombina variegata</i>	Yellow-bellied Toad	Zholt Mukach	None	II/IV	II	None	LC	None	None	Balkan	No			
<i>Hyla arborea</i>	European Tree Frog	Gatalinka	None	IV	II	None	LC	None	None	No	No			
<i>Lissotriton vulgaris graecus</i>	Common Newt	Obichen Mrmorec	None	None	III	None	No data	None	None	South Balkan	No			
<i>Pelobates syriacus balcanicus</i>	Balkan Spadefoot Toad	Balkanska Lukova Zhaba	None	IV	II	None	No data	None	None	Balkan	No			
<i>Pelophylax kurtmuelleri</i>	Greek Marsh Frog	Balkanska Ezerska Zhaba	None	None	III	None	LC	None	None	Balkan	No			
<i>Pseudepidalea viridis</i>	Green Toad	Zelena Krastava Zhaba	None	IV	II	None	LC	None	None	No	No			
<i>Rana dalmatina</i>	Agile Frog	Gorska Zhaba	None	IV	II	None	LC	None	None	No	No			
<i>Rana graeca</i>	Greek Stream Frog	Potochna Zhaba	None	IV	III	None	LC	None	None	Balkan	No			
<i>Triturus carnifex macedonicus</i>	Macedonian Crested Newt	Makedonski Mrmorec	None	II/IV	II	None	No data	None	None	SW Balkan	No			
<i>Triturus karelinii</i>	Southern Crested Newt	Juzen Mrmorec	None	II/IV	II	None	LC	None	None	No	No			
<b>REPTILES (Reptilia)</b>														
<i>Ablepharus kitaibelii</i>	Snake-eyed Skink	Kratkonogo Gushterche	None	IV	II	None	LC	None	None	No	No			
<i>Algyroides nigropunctatus</i>	Dalmatian Algyroides	Lushpesta Gushterica	None	IV	II	None	LC	None	None	Balkan	No			
<i>Coronella austriaca</i>	Smooth Snake	Planinski Smok	None	IV	II	None	LC	None	None	No	No			
<i>Dolichophis caspius</i>	Large Whip Snake	Zholt smok	None	IV	II	None	LC	None	None	No	No			
<i>Elaphe quatuorlineata</i>	Four-lined Snake	Zhdrepka	None	II/IV	II	None	NT	None	None	No	No			
<i>Emys orbicularis</i>	European Pond Terrapin	Blatna Zhelka	None	II/IV	II	None	NT	None	None	No	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Eryx jaculus turcicus</i>	Sand Boa	Stepski Udav	None	IV	III	None	LC	II	A	No	No			
<i>Hierophis gemonensis</i>	Balkan Whip Snake	Balkanski Smok	None	None	II	None	LC	None	None	Balkan	No			
<i>Lacerta agilis</i>	Sand Lizard	Planinska Gushterica	None	IV	II	None	No data	None	None	No	No			
<i>Lacerta trilineata</i>	Balkan Green Lizard	Golem Zelen Gushter	None	IV	II	None	LC	None	None	Balkan	No			
<i>Lacerta viridis</i>	Green Lizard	Zelen Gushter	None	IV	II	None	LC	None	None	No	No			
<i>Mauremys rivulata</i>	Balkan Terrapin	Rechna Zhelka	None	II/IV	II	None	No data	None	None	No	No			
<i>Mediodactylus kotschy</i>	Kotschy's Gecko	Balkanski Gekon	None	IV	II	None	No data	None	None	No	No			
<i>Natrix tessellata</i>	Dice Snake	Ribarka	None	IV	II	None	No data	None	None	No	No			
<i>Ophisaurus apodus</i>	European Glass Lizard	Blavor, Zmijogushter	None	IV	II	None	No data	None	None	No	No			
<i>Platyceps najadum</i>	Dahl's Whip Snake	Dzitka	None	IV	II	None	LC	None	None	No	No			
<i>Podarcis erhardii</i>	Erhard's Wall Lizard	Makedonska Gushterica	None	IV	II	None	LC	None	None	Balkan	No			
<i>Podarcis muralis</i>	Common Wall Lizard	Skalesta Gushterica	None	IV	II	None	LC	None	None	No	No			
<i>Podarcis taurica</i>	Balkan Wall Lizard	Polska Gushterica	None	IV	II	None	LC	None	None	Balkan	No			
<i>Telescopus fallax</i>	Cat Snake	Machja Zmija	None	IV	II	None	LC	None	None	No	No			
<i>Testudo graeca</i>	Spur-thighed Tortoise	Polska Zhelka	None	II/IV	II	None	VU	II	A	Balkan	No		<i>Testudo graeca</i>	<i>Testudo graeca</i>
<i>Testudo hermanni boettgeri</i>	Hermann's Tortoise	Ridska Zhelka	None	II/IV	II	None	NT	II	A	Balkan	No			
<i>Vipera ammodytes</i>	Nose-horned Viper	Poskok	None	IV	II	None	LC	None	None	No	No			
<i>Vipera berus bosniensis</i>	Adder	Sharka	None	None	III	None	LC	None	None	Balkan	No			
<i>Vipera ursinii macrops</i>	Orsini's Viper	Ostroglava Sharka	None	II/IV	II	None	VU	I	A	Balkan	Yes	<i>Vipera ursinii macrops</i>		<i>Vipera ursinii macrops</i>
<i>Zamenis longissimus</i>	Aesculapian Snake	Eskulapov Smok	None	IV	II	None	LC	None	None	No	No			
<i>Zamenis situla</i>	Leopard Snake	Leopardov Smok	None	II/IV	II	None	LC	None	None	No	No			
<b>BIRDS (Aves)</b>														
<i>Accipiter brevipes</i>	Levant Sparrowhawk	Kratkoprst Jastreb	I	None	II	I	LC	II	A	No	No	<i>Accipiter brevipes*</i>		<i>Accipiter brevipes</i>
<i>Accipiter gentilis</i>	Northern Goshawk	Jastreb Kokoshkar	None	None	II	I	LC	II	A	No	No			
<i>Accipiter nisus</i>	Eurasian Sparrowhawk	Jastreb Vrapchar	None	None	II	I	LC	II	A	No	No	<i>Accipiter nisus*</i>		<i>Accipiter nisus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Acrocephalus melanopogon</i>	Moustached Warbler	Mustakjesto Trskarche	I	None	II	I	LC	None	None	No	No			
<i>Acrocephalus paludicola</i>	Aquatic Warbler	Vodno Trskarche	I	None	II	I	VU	None	None	No	No		<i>Acrocephalus paludicola</i>	<i>Acrocephalus paludicola</i>
<i>Aegolius funereus</i>	Tengmalm's Owl	Pernatonoga Kukumjavka	I	None	II	None	LC	II	A	No	No			
<i>Aegypius monachus</i>	Black Vulture	Crn Orel Mrshojadec	I	None	II	I	NT	II	A	No	Yes	<i>Aegypius monachus*</i>		<i>Aegypius monachus</i>
<i>Alauda arvensis</i>	Skylark	Polska Chuchuliga	None	None	III	None	LC	None	None	No	Yes			
<i>Alcedo atthis</i>	Common Kingfisher	Ribarche	I	None	II	None	LC	None	None	No	No			
<i>Alectoris graeca</i>	Rock Partridge	Erebica Kamenjarka	I	None	III	None	LC	None	None	No	Yes		<i>Alectoris graeca**</i>	<i>Alectoris graeca</i>
<i>Anas acuta</i>	Pintail	Shatka Lastovicharka	None	None	III	II	LC	None	None	No	Yes		<i>Anas acuta**</i>	<i>Anas acuta</i>
<i>Anas clypeata</i>	Shoveler	Shatka Lazhicharka	None	None	III	II	LC	None	None	No	No	<i>Anas clypeata*</i>		<i>Anas clypeata</i>
<i>Anas crecca</i>	Teal	Shatka krkach	None	None	III	II	LC	None	None	No	No		<i>Anas crecca**</i>	<i>Anas crecca</i>
<i>Anas penelope</i>	Wigeon	Shatka Svirkach	None	None	III	II	LC	None	None	No	No	<i>Anas penelope*</i>		<i>Anas penelope</i>
<i>Anas platyrhynchos</i>	Mallard	Diva Shatka	None	None	III	II	LC	None	None	No	No		<i>Anas platyrhynchos**</i>	<i>Anas platyrhynchos</i>
<i>Anas querquedula</i>	Garganey	Pupcharka	None	None	III	II	LC	None	None	No	Yes		<i>Anas querquedula**</i>	<i>Anas querquedula</i>
<i>Anas strepera</i>	Gadwall	Siva Shatka	None	None	III	II	LC	None	None	No	Yes	<i>Anas strepera*</i>		<i>Anas strepera</i>
<i>Anser albifrons</i>	White-fronted Goose	Belochelna Guska	None	None	III	II	LC	None	None	No	No		<i>Anser albifrons**</i>	<i>Anser albifrons</i>
<i>Anser anser</i>	Greylag Goose	Diva Guska	None	None	III	II	LC	None	None	No	No		<i>Anser anser**</i>	<i>Anser anser</i>
<i>Anser erythropus</i>	Lesser White-fronted Goose	Mala Guska	I	None	II	II	VU	None	None	No	Yes		<i>Anser erythropus**</i>	<i>Anser erythropus</i>
<i>Anser fabalis</i>	Bean Goose	Posevna Guska	None	None	III	II	LC	None	None	No	No		<i>Anser fabalis**</i>	<i>Anser fabalis</i>
<i>Anthus campestris</i>	Tawny Pipit	Polska Trepetivka	I	None	II	None	LC	None	None	No	Yes			
<i>Aquila chrysaetos</i>	Golden Eagle	Skalest (Zlaten) Orel	I	None	II	I	LC	II	A	No	No	<i>Aquila chrysaetos*</i>		<i>Aquila chrysaetos</i>
<i>Aquila clanga</i>	Spotted Eagle	Golem Kresliv Orel	I	None	II	II	VU	II	A	No	Yes	<i>Aquila clanga*</i>		<i>Aquila clanga</i>
<i>Aquila heliaca</i>	Imperial Eagle	Carski (Krstat) Orel	I	None	II	II	VU	I	A	No	Yes	<i>Aquila heliaca*</i>		<i>Aquila heliaca</i>
<i>Aquila pomarina</i>	Lesser Spotted Eagle	Mal Kresliv Orel	I	None	II	I	LC	II	A	No	No			
<i>Ardea cinerea</i>	Grey Heron	Siva Chapja	None	None	III	None	LC	None	None	No	No	<i>Ardea cinerea*</i>		<i>Ardea cinerea</i>
<i>Ardea purpurea</i>	Purple Heron	Purpurna Chapja	I	None	II	II	LC	None	None	No	Yes	<i>Ardea purpurea*</i>		<i>Ardea purpurea</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Ardeola ralloides</i>	Squacco Heron	Grivesta Chapja	I	None	II	None	LC	None	None	No	Yes	<i>Ardeola ralloides</i> *		<i>Ardeola ralloides</i>
<i>Asio flammeus</i>	Short-eared Owl	Blatna Kratkoushesta Utka	I	None	II	None	LC	II	A	No	Yes	<i>Asio flammeus</i> *		<i>Asio flammeus</i>
<i>Asio otus</i>	Long-eared Owl	Shumska Ushesta Utka	None	None	II	None	LC	II	A	No	No	<i>Asio otus</i> *		<i>Asio otus</i>
<i>Athene noctua</i>	Little Owl	Domashna Kukumjavka	None	None	II	None	LC	II	A	No	No	<i>Athene noctua</i> *		<i>Athene noctua</i>
<i>Aythya ferina</i>	Pochard	Kafeavoglava Potopnica	None	None	III	II	LC	None	None	No	No		<i>Aythya ferina</i> **	<i>Aythya ferina</i>
<i>Aythya fuligula</i>	Tufted Duck	Cuculesta Potopnica	None	None	III	II	LC	None	None	No	No		<i>Aythya fuligula</i> **	<i>Aythya fuligula</i>
<i>Aythya nyroca</i>	Ferruginous Duck	Njorka; Kozhufar	I	None	III	II	NT	None	None	No	Yes		<i>Aythya nyroca</i> **	<i>Aythya nyroca</i>
<i>Bonasa bonasia</i>	Hazelhen	Lesharka	I	None	III	None	LC	None	None	No	No		<i>Bonasa bonasia</i> **	<i>Bonasa bonasia</i>
<i>Botaurus stellaris</i>	Eurasian Bittern	Voden Bik; Bukavec	I	None	II	II	LC	None	None	No	Yes	<i>Botaurus stellaris</i> *		<i>Botaurus stellaris</i>
<i>Branta ruficollis</i>	Red-breasted Goose	Crvenogusha Guska	I	None	II	II	EN	None	None	No	No	<i>Branta ruficollis</i>		<i>Branta ruficollis</i>
<i>Bubo bubo</i>	Eagle Owl	Buf	I	None	II	None	LC	II	A	No	Yes	<i>Bubo bubo</i> *		<i>Bubo bubo</i>
<i>Bubulcus ibis</i>	Cattle Egret	Bivolkska (Egipetska) Chapja	I	None	II	None	LC	None	None	No	No			
<i>Burhinus oedicnemus</i>	Stone Curlew	Churulin	I	None	II	II	LC	None	None	No	Yes	<i>Burhinus oedicnemus</i> *		<i>Burhinus oedicnemus</i>
<i>Buteo buteo</i>	Common Buzzard	Obichen Jastreb Gluvchar	None	None	II	I	LC	II	A	No	No	<i>Buteo buteo</i> *		<i>Buteo buteo</i>
<i>Buteo lagopus</i>	Rough-legged Buzzard	Severen Jastreb Gluvchar	None	None	II	I	LC	II	A	No	No	<i>Buteo lagopus</i> *		<i>Buteo lagopus</i>
<i>Buteo rufinus</i>	Long-legged Buzzard	Lisest Jastreb Gluvchar	I	None	II	I	LC	II	A	No	Yes	<i>Buteo rufinus</i> *		<i>Buteo rufinus</i>
<i>Calandrella brachydactyla</i>	Hume's Short-toed Lark	Mala Chuchuliga	I	None	II	None	LC	None	None	No	Yes			
<i>Calidris alpina</i>	Dunlin	Severna Peskarka	None	None	II	I	LC	None	None	No	Yes			
<i>Caprimulgus europaeus</i>	Europeean Nightjar	Nokna Lastovica; Kozodoj	I	None	II	None	LC	None	None	No	No			
<i>Casmerodius albus</i>	Great White Egret	Golema Bela Chapja	I	None	II	II	LC	None	None	No	No	<i>Casmerodius albus</i> *		<i>Casmerodius albus</i>
<i>Charadrius alexandrinus</i>	Kentish Plover	Morski Dozhdosvirec	I	None	II	I	LC	None	None	No	No			
<i>Chlidonias hybridus</i>	Whiskered Tern	Belobrada Vrtimushka	I	None	III	None	LC	None	None	No	No			
<i>Chlidonias niger</i>	Black Tern	Crna Vrtimushka	I	None	III	II	LC	None	None	No	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Ciconia ciconia</i>	White Stork	Bel Shtrk	I	None	II	II	LC	None	None	No	Yes	<i>Ciconia ciconia</i> *		<i>Ciconia ciconia</i>
<i>Ciconia nigra</i>	Black Stork	Crn Shtrk	I	None	II	None	LC	II	A	No	No	<i>Ciconia nigra</i> *		<i>Ciconia nigra</i>
<i>Circaetus gallicus</i>	Short-toed Eagle	Orel Zmijar	I	None	II	I	LC	II	A	No	No	<i>Circaetus gallicus</i> *		<i>Circaetus gallicus</i>
<i>Circus aeruginosus</i>	Marsh Harrier	Blatna Eja	I	None	II	I	LC	II	A	No	No	<i>Circus aeruginosus</i> *		<i>Circus aeruginosus</i>
<i>Circus cyaneus</i>	Hen Harrier	Polska Eja	I	None	II	I	LC	II	A	No	Yes	<i>Circus cyaneus</i> *		<i>Circus cyaneus</i>
<i>Circus macrourus</i>	Pallid Harrier	Stepska Eja	I	None	II	I	NT	II	A	No	Yes			
<i>Circus pygargus</i>	Montagu's Harrier	Livadska Eja	I	None	II	I	LC	II	A	No	No	<i>Circus pygargus</i> *		<i>Circus pygargus</i>
<i>Columba livia</i>	Rock Dove	Div Gulab	None	None	III	None	LC	None	None	No	No		<i>Columba livia</i> *	<i>Columba livia</i>
<i>Columba oenas</i>	Stock Dove	Gorski Gulab	None	None	III	None	LC	None	None	No	No		<i>Columba oenas</i> *	<i>Columba oenas</i>
<i>Columba palumbus</i>	Wood Pigeon	Gulab Grivnesh	None	None	III	None	LC	None	None	No	No		<i>Columba palumbus</i> *	<i>Columba palumbus</i>
<i>Coracias garrulus</i>	European Roller	Smrdivrana	I	None	II	None	NT	None	None	No	No	<i>Coracias garrulus</i> *		<i>Coracias garrulus</i>
<i>Corvus corax</i>	Raven	Gavran	None	None	III	None	LC	None	None	No	No	<i>Corvus corax</i> *		<i>Corvus corax</i>
<i>Coturnix coturnix</i>	Common Quail	Potpoloshka	None	None	III	II	LC	None	None	No	Yes		<i>Coturnix coturnix</i> **	<i>Coturnix coturnix</i>
<i>Crex crex</i>	Corncrake	Livadski Krekach	I	None	II	II	NT	None	None	No	Yes	<i>Crex crex</i> *		<i>Crex crex</i>
<i>Cygnus bewickii</i>	Tundra Swan	Mal Lebed	I	None	II	II	No data	None	None	No	No			
<i>Cygnus cygnus</i>	Whooper Swan	Zholtoklun Lebed; Lebed Pejach	I	None	II	II	LC	None	None	No	No	<i>Cygnus cygnus</i> *		<i>Cygnus cygnus</i>
<i>Cygnus olor</i>	Mute Swan	Crvenoklun (Nem) Lebed	None	None	III	II	LC	None	None	No	No	<i>Cygnus olor</i> *		<i>Cygnus olor</i>
<i>Dendrocopos leucotos</i>	White-backed Woodpecker	Belogrb Sharen Klukajdrvec	I	None	II	None	LC	None	None	No	No			
<i>Dendrocopos medius</i>	Middle Spotted Woodpecker	Obichen Sharen Klukajdrvec	I	None	II	None	LC	None	None	No	No			
<i>Dendrocopos syriacus</i>	Syrian Woodpecker	Sirijski Sharen Klukajdrvec	I	None	II	None	LC	None	None	No	No			
<i>Dryocopus martius</i>	Black Woodpecker	Crn Klukajdrvec	I	None	II	None	LC	None	None	No	No			
<i>Egretta garzetta</i>	Little Egret	Mala Bela Chapja	I	None	II	None	LC	None	None	No	No	<i>Egretta garzetta</i> *		<i>Egretta garzetta</i>
<i>Emberiza cia</i>	Rock Bunting	Planinska Ovesarka	None	None	II	None	LC	None	None	No	Yes			
<i>Emberiza hortulana</i>	Ortolan Bunting	Gradinarska Ovesarka	I	None	III	None	LC	None	None	No	Yes			
<i>Emberiza melanocephala</i>	Black-headed Bunting	Crnoglava Ovesarka	None	None	II	None	LC	None	None	No	Yes			
<i>Eudromias morinellus</i>	Dotterel	Planinski Dozhdosvirec	I	None	II	None	LC	None	None	No	No			
<i>Falco biarmicus</i>	Lanner Falcon	Juzhen Sokol	I	None	II	I	LC	II	A	No	Yes	<i>Falco biarmicus</i> *		<i>Falco biarmicus</i>
<i>Falco cherrug</i>	Saker Falcon	Stepski Sokol	I	None	II	I	EN	II	A	No	Yes	<i>Falco cherrug</i>		<i>Falco cherrug</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Falco columbarius</i>	Merlin	Mal Sokol	I	None	II	I	LC	II	A	No	No	<i>Falco columbarius</i> *		<i>Falco columbarius</i>
<i>Falco eleonora</i>	Eleonora's Falcon	Skalest (Crn) Sokol	I	None	II	I	LC	II	A	No	No			
<i>Falco naumanni</i>	Lesser Kestrel	Stepska Vetrushka	I	None	II	II	VU	II	A	No	Yes	<i>Falco naumanni</i> *		<i>Falco naumanni</i>
<i>Falco peregrinus</i>	Peregrine Falcon	Siv Sokol	I	None	II	I	LC	I	A	No	No	<i>Falco peregrinus</i> *		<i>Falco peregrinus</i>
<i>Falco subbuteo</i>	Hobby	Sokol Lastovichar	None	None	II	I	LC	II	A	No	No	<i>Falco subbuteo</i> *		<i>Falco subbuteo</i>
<i>Falco tinnunculus</i>	Kestrel	Obichna Vetrushka	None	None	II	I	LC	II	A	No	No	<i>Falco tinnunculus</i> *		<i>Falco tinnunculus</i>
<i>Falco vespertinus</i>	Red-footed Falcon	Vecherna (Crvenonoga) Vetrushka	I	None	II	I	NT	II	A	No	Yes	<i>Falco vespertinus</i> *		<i>Falco vespertinus</i>
<i>Ficedula albicollis</i>	Collared Flycatcher	Beloshijesto Muvarche	I	None	II	I	LC	None	None	No	No			
<i>Ficedula parva</i>	Red-breasted Flycatcher	Crvenogushesto Muvarche	I	None	II	I	LC	None	None	No	No			
<i>Ficedula semitorquata</i>	Semi-collared Flycatcher	Balkansko Muvarche	I	None	II	I	NT	None	None	No	No			
<i>Fulica atra</i>	Common Coot	Liska	None	None	III	II	LC	None	None	No	No		<i>Fulica atra</i> **	<i>Fulica atra</i>
<i>Gallinago media</i>	Great Snipe	Golema Bekasina	I	None	II	I	NT	None	None	No	Yes		<i>Gallinago media</i> **	<i>Gallinago media</i>
<i>Gallinula chloropus</i>	Moorhen	Zelenonoga Blatna Kokoshka	None	None	III	None	LC	None	None	No	No	<i>Gallinula chloropus</i> *		<i>Gallinula chloropus</i>
<i>Garrulus glandarius</i>	Eurasian Jay	Sojka	None	None	III	None	LC	None	None	No	No	<i>Garrulus glandarius</i> *		<i>Garrulus glandarius</i>
<i>Gavia arctica</i>	Black-throated Diver	Crnogushest Morski Nurkach	I	None	II	II	LC	None	None	No	Yes			
<i>Gavia stellata</i>	Red-throated Diver	Crvenogushest Morski Nurkach	I	None	II	II	LC	None	None	No	Yes			
<i>Gelochelidon nilotica</i>	Gull-billed Tern	Debelokluna Vrtimushka	I	None	III	II	LC	None	None	No	Yes			
<i>Glareola nordmanni</i>	Black-winged Pratincole	Stepska Blatna Lastovica	None	None	II	II	NT	None	None	No	No			
<i>Glareola pratincola</i>	Collared Pratincole	Obichna Blatna Lastovica	I	None	II	II	LC	None	None	No	Yes			
<i>Grus grus</i>	Common Crane	Siv Zherav	I	None	II	I	LC	II	A	No	Yes	<i>Grus grus</i> *		<i>Grus grus</i>
<i>Gypaetus barbatus</i>	Lammergeier	Bradest Orel Mrshojadec	I	None	II	I	LC	II	A	No	Yes	<i>Gypaetus barbatus</i> *		<i>Gypaetus barbatus</i>
<i>Gyps fulvus</i>	Griffon Vulture	Beloglav Orel Mrshojadec	I	None	II	I	LC	II	A	No	No	<i>Gyps fulvus</i> *		<i>Gyps fulvus</i>
<i>Haliaeetus albicilla</i>	White-tailed Sea Eagle	Beloopashest Morski Orel	I	None	II	II	LC	I	A	No	No	<i>Haliaeetus albicilla</i> *		<i>Haliaeetus albicilla</i>
<i>Hieraaetus fasciatus</i>	Bonelli's Eagle	Jastreboviden Orel	I	None	II	I	LC	None	None	No	Yes			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Hieraaetus pennatus</i>	Booted Eagle	Mal (Djudjest) Orel	I	None	II	I	LC	II	A	No	No	<i>Hieraaetus pennatus*</i>		<i>Hieraaetus pennatus</i>
<i>Himantopus himantopus</i>	Black-winged Stilt	Dolgonoga Sabjarka	I	None	II	II	LC	None	None	No	No			
<i>Hippolais olivetorum</i>	Olive-tree Warbler	Golem Prismechnik	I	None	II	I	LC	None	None	No	No			
<i>Hippolais pallida</i>	Olivaceous Warbler	Mal Prismechnik	None	None	II	I	LC	None	None	No	Yes			
<i>Ixobrychus minutus</i>	Little Bittern	Mal Voden Bik; Mal Bukavec	I	None	II	II	LC	None	None	No	Yes	<i>Ixobrychus minutus*</i>		<i>Ixobrychus minutus</i>
<i>Lanius collurio</i>	Red-backed Shrike	Crvenogrbo Svrache	I	None	II	None	LC	None	None	No	No			
<i>Lanius minor</i>	Lesser Grey Shrike	Malo Sivo Svrache	I	None	II	None	LC	None	None	No	No			
<i>Lanius nubicus</i>	Masked Shrike	Belochelno Svrache	I	None	II	None	LC	None	None	No	Yes			
<i>Lanius senator</i>	Woodchat Shrike	Crvenoglavo Svrache	None	None	II	None	LC	None	None	No	Yes			
<i>Larus genei</i>	Slender-billed Gull	Tenkoklun Galeb	I	None	II	II	LC	None	None	No	No			
<i>Larus melanocephalus</i>	Mediterranean Gull	Crnoglav Galeb	I	None	II	II	LC	None	None	No	No			
<i>Larus minutus</i>	Little Gull	Mal Galeb	I	None	II	None	LC	None	None	No	No	<i>Larus minutus*</i>		<i>Larus minutus</i>
<i>Larus ridibundus</i>	Black-headed Gull	Ezerski Galeb	None	None	III	None	LC	None	None	No	No	<i>Larus ridibundus*</i>		<i>Larus ridibundus</i>
<i>Limicola falcinellus</i>	Broad-billed Sandpiper	Ploskokluna Peskarka	None	None	II	I	LC	None	None	No	Yes			
<i>Limosa limosa</i>	Black-tailed Godwit	Crno-opashesta Shljuka	None	None	III	I	NT	None	None	No	Yes			
<i>Lullula arborea</i>	Woodlark	Shumska Chuchuliga	I	None	III	None	LC	None	None	No	Yes			
<i>Lymnocyptes minimus</i>	Jack Snipe	Mala Bekasina	None	None	III	I	LC	None	None	No	No		<i>Lymnocyptes minimus**</i>	<i>Lymnocyptes minimus</i>
<i>Marmaronetta angustirostris</i>	Marbled Teal	Mramorna Shatka	I	None	II	II	VU	None	None	No	Yes		<i>Marmaronetta angustirostris</i>	<i>Marmaronetta angustirostris</i>
<i>Melanocorypha calandra</i>	Calandra Lark	Stepska Chuchuliga	I	None	II	None	LC	None	None	No	No			
<i>Mergellus albellus</i>	Smew	Mal Severen (Bel) Potopnik	I	None	II	II	LC	None	None	No	Yes			
<i>Milvus migrans</i>	Black Kite	Crna Lunja	I	None	II	I	LC	II	A	No	Yes	<i>Milvus migrans*</i>		<i>Milvus migrans</i>
<i>Milvus milvus</i>	Red Kite	Crvena Lunja	I	None	II	I	NT	II	A	No	No	<i>Milvus milvus*</i>		<i>Milvus milvus</i>
<i>Monticola solitarius</i>	Blue Rock Thrush	Sin Skalest Drozd	None	None	II	None	LC	None	None	No	Yes			
<i>Neophron percnopterus</i>	Egyptian Vulture	Mal Orel Mrshojadec; Kanja	I	None	II	II	EN	II	A	No	Yes	<i>Neophron percnopterus*</i>		<i>Neophron percnopterus</i>

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Netta rufina</i>	Red-crested Pochard	Crvenokluna Potopnica; Prevez	None	None	III	II	LC	None	None	No	No	<i>Netta rufina</i> *		<i>Netta rufina</i>
<i>Numenius arquata</i>	Eurasian Curlew	Blatna Shljuka	None	None	III	I	NT	None	None	No	No			
<i>Numenius tenuirostris</i>	Slender-billed Curlew	Tenkokluna Shljuka	I	None	II	II	CR	I	A	No	No	<i>Numenius tenuirostris</i>		<i>Numenius tenuirostris</i>
<i>Nycticorax nycticorax</i>	Black-crowned Heron	Nokjna Chapja	I	None	II	None	LC	None	None	No	No	<i>Nycticorax nycticorax</i> *		<i>Nycticorax nycticorax</i>
<i>Oenanthe hispanica</i>	Black-eared Wheatear	Crnogushesto Kamenjarche	None	None	II	None	LC	None	None	No	Yes			
<i>Oenanthe pleshanka</i>	Pied Wheatear	Stepsko Kamenjarche	I	None	II	None	LC	None	None	No	No			
<i>Oriolus oriolus</i>	Golden Oriole	Zholna (Vuga)	None	None	II	None	LC	None	None	No	No	<i>Oriolus oriolus</i> *		<i>Oriolus oriolus</i>
<i>Otis tarda</i>	Great Bustard	Golema Droplja	I	None	II	II	VU	II	A	No	No	<i>Otis tarda</i> *		<i>Otis tarda</i>
<i>Otus scops</i>	Scops Owl	Kjuk	None	None	II	None	LC	II	A	No	No	<i>Otus scops</i> *		<i>Otus scops</i>
<i>Oxyura leucocephala</i>	White-headed Duck	Shilesto-opashesta Potopnica	I	None	II	II	EN	None	None	No	Yes	<i>Oxyura leucocephala</i>		<i>Oxyura leucocephala</i>
<i>Pandion haliaetus</i>	Osprey	Orel Ribar	I	None	II	I	LC	II	A	No	No		<i>Pandion haliaetus</i>	<i>Pandion haliaetus</i>
<i>Pelecanus crispus</i>	Dalmatian Pelican	Dalmatinski (Kadroglav) Pelikan	I	None	II	I	VU	I	A	No	Yes	<i>Pelecanus crispus</i> *		<i>Pelecanus crispus</i>
<i>Pelecanus onocrotalus</i>	White Pelican	Bel (Obichen) Pelikan	I	None	II	I	LC	None	None	No	No	<i>Pelecanus onocrotalus</i> *		<i>Pelecanus onocrotalus</i>
<i>Perdix perdix</i>	Common Partridge	Polska Erebrica	None	None	III	None	LC	None	None	No	Yes		<i>Perdix perdix</i> **	<i>Perdix perdix</i>
<i>Pernis apivorus</i>	Honey Buzzard	Jastreb Osojad	I	None	II	I	LC	II	A	No	No	<i>Pernis apivorus</i> *		<i>Pernis apivorus</i>
<i>Phalacrocorax carbo</i>	Great Cormorant	Golem Kormoran	None	None	III	None	LC	None	None	No	No			
<i>Phalacrocorax pygmaeus</i>	Pygmy Cormorant	Mal Kormoran	I	None	II	II	LC	None	None	No	Yes	<i>Phalacrocorax pygmaeus</i> *		<i>Phalacrocorax pygmaeus</i>
<i>Phasianus colchicus</i>	Common Pheasant	Fazan	None	None	III	None	LC	None	None	No	No		<i>Phasianus colchicus</i> **	<i>Phasianus colchicus</i>
<i>Philomachus pugnax</i>	Ruff	Bojnik	I	None	III	I	LC	None	None	No	No			
<i>Phoenicopterus ruber</i>	Greater Flamingo	Flamingo	I	None	II	None	LC	II	A	No	No			
<i>Phoenicurus phoenicurus</i>	Common Redstart	Shumska Crvenoopashka	None	None	II	None	LC	None	None	No	Yes			
<i>Picus canus</i>	Grey-headed Woodpecker	Sivoglav Klukajdrvec	I	None	II	None	LC	None	None	No	No			
<i>Platalea leucorodia</i>	Eurasian Spoonbill	Chapja Lazhicharka	I	None	II	II	LC	II	A	No	Yes			
<i>Plegadis falcinellus</i>	Glossy Ibis	Bleskav Ibis	I	None	II	None	LC	None	None	No	No	<i>Plegadis falcinellus</i> *		<i>Plegadis falcinellus</i>



Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Pluvialis squatarola</i>	Grey Plover	Sivoperest Dozhdosvirec	I	None	III	None	LC	None	None	No	No			
<i>Podiceps auritus</i>	Slavonian Grebe	Ushest Nurkach	I	None	II	II	LC	None	None	No	No			
<i>Podiceps cristatus</i>	Great Crested Grebe	Golem Nurkach	None	None	None	None	LC	None	None	No	No	<i>Podiceps cristatus*</i>		<i>Podiceps cristatus</i>
<i>Podiceps grisegena</i>	Red-necked Grebe	Crvenovrat Nurkach	None	None	II	II	LC	None	None	No	No	<i>Podiceps grisegena*</i>		<i>Podiceps grisegena</i>
<i>Podiceps nigricollis</i>	Black-necked Grebe	Crnovrat Nurkach	None	None	II	None	LC	None	None	No	No			
<i>Porzana parva</i>	Little Crane	Obichna Sharena Blatna Kokoshka	I	None	II	II	LC	None	None	No	No			
<i>Porzana porzana</i>	Spotted Crane	Golema Sharena Blatna Kokoshka	I	None	II	II	LC	None	None	No	No			
<i>Porzana pusilla</i>	Baillon's Crane	Mala Sharena Blatna Kokoshka	I	None	II	II	LC	None	None	No	No			
<i>Pyrrhocorax graculus</i>	Alpine Chough	Zholtokluna Galka	None	None	II	None	LC	None	None	No	No	<i>Pyrrhocorax graculus*</i>		<i>Pyrrhocorax graculus</i>
<i>Pyrrhocorax pyrrhocorax</i>	Red-billed Chough	Crvenokluna Galka	I	None	II	None	LC	None	None	No	Yes	<i>Pyrrhocorax pyrrhocorax*</i>		<i>Pyrrhocorax pyrrhocorax</i>
<i>Rallus aquaticus</i>	Water Rail	Kresliwa Blatna Kokoshka	None	None	III	None	LC	None	None	No	No	<i>Rallus aquaticus*</i>		<i>Rallus aquaticus</i>
<i>Recurvirostra avosetta</i>	Avocet	Krivokluna Sabjarka	I	None	II	II	LC	None	None	No	No			
<i>Scolopax rusticola</i>	Woodcock	Shumska Shljuka	None	None	III	I	LC	None	None	No	Yes		<i>Scolopax rusticola**</i>	<i>Scolopax rusticola</i>
<i>Sterna albifrons</i>	Little Tern	Mala Vrtimushka	I	None	II	II	LC	None	None	No	No			
<i>Sterna caspia</i>	Caspian Tern	Kaspiska Vrtimushka	I	None	III	II	LC	None	None	No	Yes			
<i>Sterna hirundo</i>	Common Tern	Obichna Vrtimushka	I	None	II	II	LC	None	None	No	No			
<i>Sterna sandvicensis</i>	Sandwich Tern	Grivesta Vrtimushka	I	None	II	II	LC	None	None	No	No			
<i>Streptopelia decaocto</i>	Collared Dove	Gugutka	None	None	III	None	LC	None	None	No	No		<i>Streptopelia decaocto**</i>	<i>Streptopelia decaocto</i>
<i>Streptopelia turtur</i>	Turtle Dove	Grlica	None	None	III	None	LC	None	None	No	No		<i>Streptopelia turtur**</i>	<i>Streptopelia turtur</i>
<i>Strix aluco</i>	Tawny Owl	Shumska Bezushesta Utka	None	None	II	None	LC	II	A	No	No	<i>Strix aluco*</i>		<i>Strix aluco</i>
<i>Strix uralensis</i>	Ural Owl	Uralska Bezushesta Utka	I	None	II	None	LC	II	A	No	No			
<i>Sylvia hortensis</i>	Orphean Warbler	Orfejovo Koprivarche	None	None	II	I	LC	None	None	No	Yes			
<i>Sylvia nisoria</i>	Barred Warbler	Pegavo Koprivarche	I	None	II	I	LC	None	None	No	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Tachybaptus ruficollis</i>	Dabchick	Mal Nurkach	None	None	II	None	LC	None	None	No	No	<i>Tachybaptus ruficollis</i> *		<i>Tachybaptus ruficollis</i>
<i>Tadorna ferruginea</i>	Ruddy Shelduck	Lisesta Shatka	I	None	II	II	LC	None	None	No	No			
<i>Tadorna tadorna</i>	Common Shelduck	Guskovidna Shatka	None	None	II	II	LC	None	None	No	No	<i>Tadorna tadorna</i> *		<i>Tadorna tadorna</i>
<i>Tetrao tetrix</i>	Black Grouse	Mal Tetreb	None	None	III	None	LC	None	None	No	Yes			
<i>Tetrao urogallus</i>	Capercaillie	Golem Tetreb	I	None	II	None	LC	None	None	No	No			
<i>Tetrax tetrax</i>	Little Bustard	Mala Droplja	I	None	II	None	NT	II	A	No	Yes	<i>Tetrax tetrax</i> *		<i>Tetrax tetrax</i>
<i>Tringa glareola</i>	Wood Sandpiper	Mala Tringa	I	None	II	I	LC	None	None	No	No			
<i>Tyto alba</i>	Barn Owl	Kukuvija (Zabulena Utka)	None	None	II	None	LC	II	A	No	No	<i>Tyto alba</i> *		<i>Tyto alba</i>
<i>Vanellus vanellus</i>	Lapwing	Kalugjerka	None	None	III	I	LC	None	None	No	No	<i>Vanellus vanellus</i> *		<i>Vanellus vanellus</i>
<b>MAMMALS (Mammalia)</b>														
<i>Barbastella barbastellus</i>	Barbastelle	Shirokoushest Liljak	None	II/IV	II	II	VU	None	None	No	Yes		<i>Barbastella barbastellus</i>	<i>Barbastella barbastellus</i>
<i>Canis lupus</i>	Wolf	Volk	None	II/IV	II	None	LC	II	A	No	Yes			
<i>Dinaromys bogdanovi</i>	Balkan Snow Vole	Balkanska Snezhna Poljanka	None	None	None	None	VU	None	None	SW Balkan	No	<i>Dinaromys bogdanovi</i>		<i>Dinaromys bogdanovi</i>
<i>Eptesicus serotinus</i>	Serotine	Shirokokrilest Severnik	None	IV	II	II	LC	None	None	No	No			
<i>Felis silvestris</i>	Wildcat	Diva Machka	None	IV	II	None	LC	II	A	No	Yes	<i>Felis silvestris</i> *		<i>Felis silvestris</i>
<i>Hypsugo savii</i>	Savi's Pipistrelle	Saviev Liljak	None	IV	II	II	LC	None	None	No	No			
<i>Lutra lutra</i>	Otter	Vidra	None	II/IV	II	None	NT	I	A	No	Yes	<i>Lutra lutra</i> *		<i>Lutra lutra</i>
<i>Lynx lynx martinoi</i>	Balkan Lynx	Balkanski Ris	None	II/IV	III	None	No data	II	A	Balkan	No	<i>Lynx lynx martinoi</i> *		<i>Lynx lynx martinoi</i>
<i>Microtus felteni</i>	Balkan Pine Vole	Balkanska Poljanka	None	None	None	None	LC	None	None	South Balkan	No		<i>Microtus felteni</i>	<i>Microtus felteni</i>
<i>Miniopterus schreibersii</i>	Schreibers' Bent-winged Bat	Dolgokrilest Liljak	None	II/IV	II	II	NT	None	None	No	Yes			
<i>Myotis blythii</i>	Lesser Mouse-eared Bat	Ostroushest Nokjnik	None	II/IV	II	II	LC	None	None	No	No			
<i>Myotis capaccinii</i>	Long-fingered Bat	Dolgoprst Nokjnik	None	II/IV	II	II	VU	None	None	No	Yes		<i>Myotis capaccinii</i>	<i>Myotis capaccinii</i>
<i>Myotis daubentonii</i>	Daubenton's Bat	Voden Nokjnik	None	IV	II	II	LC	None	None	No	No			
<i>Myotis emarginatus</i>	Geoffroy's Bat	Troboen Nokjnik	None	II/IV	II	II	LC	None	None	No	Yes			
<i>Myotis myotis</i>	Greater Mouse-eared Bat	Golem Nokjnik	None	II/IV	II	II	LC	None	None	No	No			

Name			International Criteria							National Assessment				
Species Name in Latin	English Name	Macedonian Name	Birds Directive 79/409/EEC	Habitats Directive 92/43/EEC	Berne Conv.	Bonn Conv.	IUCN Global Red List	CITES	Regulation CITES 338/97/EC	Macedon./Balkan Endemic	Rare/Endangered Species at a National Level (2003)	Strictly Protected Wild Species	Protected Wild Species	Inclusion in National Red List
(Italic script)	if applicable	if applicable	I or None	II/IV or None	Annex I, II, III or None	Annex I, II or None	CR, EN, VU, NT, LC, DD	Annex I, II, III or None	Annex A/B or None	MKD/Balkan Endemic or No	Yes/No			
<i>Myotis mystacinus</i>	Whiskered Bat	Mustakjest Nokjnik	None	IV	II	II	LC	None	None	No	No			
<i>Myotis nattereri</i>	Natterer's Bat	Chetinst Nokjnik	None	IV	II	II	LC	None	None	No	No			
<i>Nyctalus leisleri</i>	Leisler's Bat	Shumski Vechernik	None	IV	II	II	LC	None	None	No	No			
<i>Nyctalus noctula</i>	Noctule	Lisest Vechernik	None	IV	II	II	LC	None	None	No	No			
<i>Pipistrellus kuhlii</i>	Kuhl's Pipistrelle	Beloraben Liljak	None	IV	II	II	LC	None	None	No	No			
<i>Pipistrellus nathusii</i>	Nathusius' Pipistrelle	Natusiev Liljak	None	IV	II	II	LC	None	None	No	No			
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Dzudzest Liljak	None	IV	III	II	LC	None	None	No	No			
<i>Plecotus austriacus</i>	Grey Long-eared Bat	Siv Ushest Liljak	None	IV	II	II	LC	None	None	No	No			
<i>Rhinolophus blasii</i>	Blasius' Horseshoe Bat	Blasiev Potkovichar	None	II/IV	II	II	VU	None	None	No	Yes		<i>Rhinolophus blasii</i>	<i>Rhinolophus blasii</i>
<i>Rhinolophus euryale</i>	Mediterranean Horseshoe Bat	Juzhen Potkovichar	None	II/IV	II	II	VU	None	None	No	Yes		<i>Rhinolophus euryale</i>	<i>Rhinolophus euryale</i>
<i>Rhinolophus ferrumequinum</i>	Greater Horseshoe Bat	Golem Potkovichar	None	II/IV	II	II	LC	None	None	No	Yes			
<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	Mal Potkovichar	None	II/IV	II	II	LC	None	None	No	Yes			
<i>Rhinolophus mehelyi</i>	Mehely's Horseshoe Bat	Meheliev Potkovichar	None	II/IV	II	II	VU	None	None	No	Yes		<i>Rhinolophus mehelyi</i>	<i>Rhinolophus mehelyi</i>
<i>Rupicapra rupicapra balcanica</i>	Balkan Chamois	Balkanska Divokoza	None	II/IV	III	None	No data	None	None	Balkan	No			
<i>Spermophilus citellus karamani</i>	Macedonian Souslik	Makedonska Stobolka	None	II/IV	II	None	No data	None	None	MKD	Yes	<i>Spermophilus citellus karamani</i> *		<i>Spermophilus citellus karamani</i>
<i>Tadarida teniotis</i>	European Free-tailed Bat	Opashest Liljak	None	IV	II	II	LC	None	None	No	No			
<i>Talpa stankovici</i>	Balkan Mole	Reliktna Krtica	None	None	None	None	LC	None	None	Balkan	No			
<i>Ursus arctos</i>	Brown Bear	Kafeava Mechka	None	II/IV	II	None	LC	II	B	No	No	<i>Ursus arctos</i> *		<i>Ursus arctos</i>
<i>Vespertilio murinus</i>	Parti-coloured Bat	Sharen Polnokjnik	None	IV	II	II	LC	None	None	No	No			
<i>Vormela peregusna</i>	Marbled Polecat	Sharen Tvor	None	II/IV	II	None	VU	None	None	No	Yes		<i>Vormela peregusna</i>	<i>Vormela peregusna</i>

\* Pursuant to Law on Hunting (Official Gazette of RM No 26/09), it is permanently prohibited to hunt for a bear, lynx, wildcat, otter, and specific bird species.

\*\* Pursuant to Law on Hunting (Official Gazette of RM No 26/09), specific bird species are under hunting moratorium.

\*\*\* Order for Ban on Collection for Usage and Trade (Official Gazette of RM No 86/06).

II\* Species of fungi proposed for protection under Bern Convention, Annex II

## APPENDIX C

---

Species Reference lists from the project 'Strengthening the capacities for implementation of NATURA 2000', a project funded by the EU and implemented by a consortium led by Particip.

- Draft List of bird species from Annex I of the Birds Directive, migratory birds and other birds of importance regularly occurring in the Beneficiary country (D2.01)
- Draft List of species of plants and animals listed in Annex II of the Habitats Directive for each of the two biogeographical regions: continental and alpine (D2.03)



The European Union's IPA programme  
TAIB 2011



# STRENGTHENING THE CAPACITIES FOR IMPLEMENTATION OF NATURA 2000

EuropeAid/136609/IH/SER/MK  
Version 1.1

Draft List of bird species from Annex I of the Birds Directive, migratory birds and other birds of importance regularly occurring in the Beneficiary country (D2.01)

09.02.2017



This project is funded by  
The European Union

A project implemented by Particip GmbH and  
its Consortium partners

Disclaimer:

*This report was produced by the Technical assistance to 'Strengthening the capacities for implementation of NATURA 2000', a project funded by the EU and implemented by a consortium led by Particip.*

*The report is the property of the European Commission. Reproduction is authorised for non-commercial purposes provided the source is acknowledged.*

*The contents of this publication are the sole responsibility of the Consortium providing the Technical assistance to 'Strengthening the capacities for implementation of NATURA 2000' and can in no way be taken to reflect the views of the European Union.*

*The report is the result of a collaborative effort by members of the Technical Assistance team, Dr Daniel BOGNER – Team Leader/Key Expert 1 and Expert in Natura 2000, Dr Jiri ZICHA – Key Expert 2/Deputy Team Leader and Legal Expert, Ernesto RUIZ – Key Expert 3 and Habitat and SPA Expert and the Consortium backstopping team.*

*Edited by Daniel Bogner, Jiri Zicha, Ernesto Ruiz, Lidija Fajdiga, Aleksandar Maksimovic*

© 2016 European Commission.

**Strengthening the capacities for implementation of NATURA 2000- EUROPEAID/136609/IH/SER/MK**

This project is funded by the European Union



**Type of report:** *DII.01 Draft List of bird species from Annex I of the Birds Directive and other migratory birds regularly occurring in the Beneficiary country*

**Reporting period:** *01 March 2016 until 31 December 2016*

**First draft version submitted on:** *December 22, 2016*

**Comments received on:** *February 02, 2017*

**Final version submitted on:** *February 09, 2017*



## Table of Contents

---

<b>TABLE OF CONTENTS</b>	<b>4</b>
<b>PROJECT SYNOPSIS</b>	<b>5</b>
<b>ABBREVIATIONS</b>	<b>7</b>
<b>1 INTRODUCTION</b>	<b>8</b>
<b>2 LIST OF SPECIES OF BIRDS IN ANNEX I OF THE BIRDS DIRECTIVE WITH A RELEVANT PRESENCE IN THE COUNTRY</b>	<b>11</b>
<b>3 MIGRATORY SPECIES OF BIRDS NOT INCLUDED IN ANNEX I OF BIRDS DIRECTIVE WHICH DESERVE SAME TREATMENT</b>	<b>15</b>
<b>4 SPECIES OF BIRDS NOT INCLUDED IN ANNEX I OF BIRDS DIRECTIVE AND ARE NOT MIGRATORY WHICH DESERVE STRICT PROTECTION</b>	<b>17</b>

## Project Synopsis

Programme Name	IPA Component I (TAIB 2011)		
Project Name	Strengthening the capacities for implementation of NATURA 2000		
Reference No:	EUROPEAID/ 136609/IH/SER/MK		
Contract Number	12-8709/1		
Project Duration	13,5 months including addendum of 45 days		
Project Commencement Date	01 February 2016		
Project End Date	17 March 2017		
Name:	Ministry of Environment and Physical Planning MoEPP	Ministry of Finance Central Financing and Contracting Department (CFCD)	Particip GmbH led Consortium
Role:	Beneficiary institution	Contracting Authority	Contractor
Address:	Goce Delcev 18, 1000 Skopje	Dame Gruev 12, 1000 Skopje	Merzhauerstr. 183, Freiburg, Germany
Telephone:	+389 75250234	+389 2 3255 409	+32 2 550 116 0
E-mail:	<i>jadrankaivanova@yahoo.com</i>	<i>radi- ca.koceva@finance.gov.mk llir.Umeri@finance.gov.mk</i>	<i>aleksandar.maksimovic@particip.eu</i>
Contact Person	Jadranka Ivanova , SPO, MoEPP	Radica Koceva, CFCD Head of Department llir Umeri, Monitoring Officer	Aleksandar Maksimovic, Project Direc- tor
Overall Objective	The overall objective of the project is to increase the effectiveness of the Beneficiary country's preparation for EU accession, in area of nature protection.		
Purpose	The purpose of this contract is to assist the Beneficiary country to carry out the preparation of establishment of Natura 2000 network		
Expected Results and Key Activities as per ToR	<ol style="list-style-type: none"> <li>1. Harmonization of National legislation with EU directives related to nature protection; Prepared draft Amendments to the Law on Nature Protection and other relevant implementing (primary and secondary) legislation, Prepared Plan for implementation of Birds and Habitat Directives;</li> <li>2. Assessment at national level of potential sites, according Birds and Habitat Directives, for NATURA 2000 Network and at least seven potential Natura 2000 sites proposed which would correspond to the requirements of Birds and Habitats Directives;</li> <li>3. GIS system for NATURA 2000 developed;</li> <li>4. Administrative capacity for implementation of nature protection legislation strengthened;</li> <li>5. Public awareness campaign for NATURA 2000 implemented.</li> </ol>		
Indicators to confirm the successful achievements of the project results	<p>Component I:</p> <ol style="list-style-type: none"> <li>1. Prepared gap assessment report for implementation and compliance with EU nature protection acquis,</li> <li>2. Recommendations for amendments of the Law of Nature Protection and other primary and secondary legislation,</li> <li>3. Prepared draft text of the Amendments to the Law on Nature Protection accompanied with Table of Concordance and prepared draft text of minimum two secondary legislation, with Table of Concordance.</li> </ol> <p>Component II:</p> <ol style="list-style-type: none"> <li>4. Prepared plan for implementation of Habitat and Birds Directives,</li> <li>5. Draft List of bird species from Annex I of the Birds Directive and other migratory birds regularly</li> </ol>		

	<p>occurring in the Beneficiary country,</p> <ol style="list-style-type: none"> <li>6. Draft List of habitat types listed in Annex I of the Habitats Directive,</li> <li>7. Draft List of species of plants and animals listed in Annex II of the Habitats Directive,</li> <li>8. Plan for future field research.</li> </ol> <p>Component III:</p> <ol style="list-style-type: none"> <li>9. Completing Standard Data Form Natura 2000 data form for seven sites and update of National Information System for Biodiversity with collected data,</li> <li>10. Study on development of Geographic Information System (GIS) for nature protected sites in compliance with Natura 2000 Network requirements,</li> <li>11. Digital GIS map of selected 7 proposal Natura 2000 network.</li> </ol> <p>Component IV:</p> <ol style="list-style-type: none"> <li>12. Plan for strengthening the administrative capacity for implementation of the NATURA 2000,</li> <li>13. Training plan with short and long term trainings for strengthening the administrative capacity for implementation of NATURA 2000,</li> <li>14. Training curricula for nature protection according to NATURA 2000 from short-term training plan.</li> </ol> <p>Component V:</p> <ol style="list-style-type: none"> <li>15. Development of Public information and consultation programme,</li> <li>16. Development and print of Public Information Tools on Natura 2000,</li> <li>17. Development of web page.</li> </ol>
Key Stakeholders	<ul style="list-style-type: none"> <li>▪ Ministry of Finance represented through CFCD;</li> <li>▪ Ministry of Environment and Physical Planning MoEPP;</li> <li>▪ Ministry of Agriculture, Forestry and Water Economy MAWRE;</li> <li>▪ National Parks (Mavrovo, Pelister and Galicica National Park);</li> <li>▪ Hydro-biological Institute, Ohrid;</li> <li>▪ Lake Prespa Nature Monument management authority, Municipality Resen;</li> <li>▪ Ministry of Transport;</li> <li>▪ Public Enterprise for State Roads ;</li> <li>▪ Macedonian Museum of Natural History;</li> <li>▪ Universities and Faculties in Beneficiary country;</li> <li>▪ Environmental Civil Society Organizations</li> <li>▪ Landowners;</li> <li>▪ Local authorities (Municipalities);</li> <li>▪ Business Sector;</li> <li>▪ Tourism Sector;</li> <li>▪ EU Delegation in Beneficiary Country;</li> <li>▪ Secretariat for European Affairs.</li> </ul> <p>Contracted consortium represented through Particip GmbH</p>
Target Groups	<p>Ministry of Environment and Physical Planning MoEPP          Other Ministries, state bodies and public science institutions          Authorities who manage protected areas and local authorities          NGOs and other professional organisations</p>
Geographical area to be covered	The whole territory of the country
Reporting Period	01 March 2016 until 31 January 2017
Author of the Report	Ernesto Ruiz, 28.02.2017
Version num. 1	

## Abbreviations

<b>AA</b>	Appropriate Assessment
<b>BD</b>	Birds Directive
<b>CBD</b>	Convention on Biological Diversity
<b>CC</b>	Candidate Country
<b>CJEU</b>	Court of Justice of the European Union
<b>CLD</b>	Criminal Liability Directive
<b>EIA</b>	Environmental Impact Assessment
<b>EIAE</b>	Environmental Impact Assessment Elaborate
<b>ELD</b>	Environmental Liability Directive
<b>ETC</b>	European Topic Centre
<b>EU</b>	European Union
<b>FCS</b>	Favourable Conservation Status
<b>GIS</b>	Geographical Information System
<b>HD</b>	Habitats Directive
<b>IBA</b>	Important Bird Area
<b>LE</b>	Law on Environment
<b>LH</b>	Law on Hunting
<b>LNP</b>	Law on Nature Protection
<b>MoEPP</b>	Ministry of Environment and Physical Planning
<b>MoAFWE</b>	Ministry of Agriculture, Forestry and Water Economy
<b>MS</b>	Member State
<b>NBIS</b>	National Biodiversity Information System
<b>NBSAP</b>	National Biodiversity Strategy and Action Plan
<b>NGO</b>	Non-Governmental Organisation
<b>NIA</b>	Nature Impact Assessment
<b>NP</b>	National Park
<b>OGRM</b>	Official Gazette of Republic of Macedonia
<b>PA</b>	Protected Area
<b>pSCI</b>	Proposed Site of Community Importance
<b>RIA</b>	Regulatory Impact Assessment
<b>SAC</b>	Special Area of Conservation
<b>SCI</b>	Site of Community Importance
<b>SDF</b>	Standard Data Form
<b>SEA</b>	Strategic Environmental Assessment
<b>SPA</b>	Special Protection Area
<b>TEU</b>	Treaty on European Union
<b>TFEU</b>	Treaty on the Functioning of the European Union
<b>ToR</b>	Terms of Reference
<b>WG</b>	Working Group

## 1 Introduction

---

This report is to present partial results from Activity II Task 4: Draft List of bird species from Annex I of the Birds Directive and other migratory birds regularly occurring in the Beneficiary country (DII.01)

This list of species is the result of the desk work and field work from the experts. The team to develop this task was formed by two senior and two junior experts.

The aim of its work was, on the one hand, to make a bibliographical review of the birds present in the country and to determine, in liaison with local experts and based on existing publications, the list of birds in Annex I of the Birds Directive, migratory birds, and birds which deserve strict protection due to different reasons.

### Legal basis for the selection presented in this document

Bird's directive, [Directive 2009/147/EC](#) , states in articles 1, 2, 3 and 4 the following:

#### Article 1

1. *This Directive relates to the **conservation of all species of naturally occurring birds in the wild state in the European territory of the Member States to which the Treaty applies. It covers the protection, management and control of these species and lays down rules for their exploitation.***

2. *It shall apply to birds, their eggs, nests and habitats*

#### Article 2

*Member States shall take the requisite **measures to maintain the population of the species referred to in Article 1 at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level.***

#### Article 3

1. *In the light of the requirements referred to in Article 2, Member States shall take the requisite **measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1.***

2. *The preservation, maintenance and re-establishment of biotopes and habitats shall include primarily the following measures:*

(a) *Creation of protected areas;*

- (b) Upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones;*
- (c) Re-establishment of destroyed biotopes;*
- (d) Creation of biotopes.*

#### **Article 4**

*1. The species mentioned in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. In this connection, account shall be taken of:*

- (a) Species in danger of extinction;*
- (b) Species vulnerable to specific changes in their habitat;*
- (c) Species considered rare because of small populations or restricted local distribution;*
- (d) Other species requiring particular attention for reasons of the specific nature of their habitat.***

*Trends and variations in population levels shall be taken into account as a background for evaluations.*

*2. Member States shall take **similar measures for regularly occurring migratory species not listed in Annex I**, bearing in mind their need for protection in the geographical sea and land area where this Directive applies, as regards their breeding, moulting and wintering areas and staging posts along their migration routes. To this end, Member States shall pay particular attention to the protection of wetlands and particularly to wetlands of international importance.*

*3. Member States shall send the Commission all relevant information so that it may take appropriate initiatives with a view to the coordination necessary to ensure that the areas provided for in paragraphs 1 and 2 form a coherent whole which meets the protection requirements of these species in the geographical sea and land area where this Directive applies.*

*4. In respect of the protection areas referred to in paragraphs 1 and 2, Member States shall take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds, in so far as these would be significant having regard to the objectives of this Article. Outside these protection areas, Member States shall also strive to avoid pollution or deterioration of habitats.*

#### **Methodology for developing the Reference List**

1. Determine national Annex I species list (excluded those that do not occur)
2. Exclude introduced species
3. Exclude vagrants and irregularly occurring species
4. Indicate species that do not occur in predictable manner or sites or habitats
5. Mark common species that are too dispersed over extensive continuous habitats in the country
6. Identify sedentary species which occur all year round
7. Indicate migratory species which do not regularly breed

8. Identify migratory species that have similar distribution in the relevant seasons
9. Repeat step 3, 4 and 5 for remaining migratory species of Annex I separately for their occurrence in breeding and non-breeding.

## Results

Total species EU Bird Directive Annex I species occurring in Macedonia is **128** (see chapter 2), but **48** are extinct, vagrant or dispersed, unpredictable occurrence. For those species site conservation approach is not appropriate.

Migratory species (18) not included in Annex I have been also included in a second list (see chapter 3).

Finally, several species (27) have been added to the final draft list (see chapter 4) taking into consideration the following criteria:

- Endangered on European level (European red list)
  - Biome-restricted species (Mediterranean and Alpine biome)
  - Nationally endangered and rare species
  - Other international treaties and convention species lists
  - Habitat restricted species
- Total number of species in the Reference List – 128 bird species out of 334 species occurring or registered in Macedonia.
- For them:
- Sites need to be identified (SPAs) as part of Natura 2000 network in the country
- For some species the sites will be identified for just one of the annual cycles – breeding/migration or wintering
- Reporting on status and trends according to Art.12

However the list of species does not exempt the rest of the species listed for Macedonia from legal protection as the bird directive instructs that: directive relates to the conservation of all species of naturally occurring birds in the wild state in the European territory of the member states to which the treaty applies.

## 2 List of species of BIRDS in Annex I of the Birds Directive with a relevant presence in the country

---

- Classification presented below is following birds Directive.

- GAVIIFORMES
  - ✓ Gaviidae
    - *Gavia arctica*
    - *Gavia stellata*
  
- PELECANIFORMES
  - ✓ Pelecanidae
    - *Pelecanus onocrotalus*
    - *Pelecanus crispus*
  
  - ✓ Phalacrocoracidae
    - *Phalacrocorax pygmaeus*
  
- CICONIIFORMES
  - ✓ Ardeidae
    - *Ixobrychus minutus*
    - *Nycticorax nycticorax*
    - *Ardeola ralloides*
    - *Egretta garzetta*
    - *Egretta alba (Ardea alba)*
    - *Ardea purpurea*
    - *Botaurus stellaris*
  
  - ✓ Ciconiidae
    - *Ciconia nigra*
    - *Ciconia ciconia*
  
  - ✓ Threskiornithidae
    - *Plegadis falcinellus*
    - *Platalea leucorodia*
  
- ANSERIFORMES
  - ✓ Anatidae
    - *Aythya nyroca*
    - *Mergus albellus (Mergellus albellus)*
  
- FALCONIFORMES
  - ✓ Pandionidae



- *Pandion haliaetus*
- ✓ Accipitridae
  - *Accipiter brevipes*
  - *Aegypius monachus*
  - *Aquila heliaca*
  - *Aquila chrysaetos*
  - *Buteo rufinus*
  - *Clanga pomarina*
  - *Circaetus gallicus*
  - *Circus aeruginosus*
  - *Circus pygargus*
  - *Gypaetus barbatus*
  - *Gyps fulvus*
  - *Haliaeetus albicilla*
  - *Hieraaetus pennatus*
  - *Milvus migrans*
  - *Neophron percnopterus*
  - *Pernis apivorus*
- ✓ Falconidae
  - *Falco naumanni*
  - *Falco vespertinus*
  - *Falco biarmicus*
  - *Falco cherrug*
  - *Falco peregrinus*
- GALLIFORMES
  - ✓ Tetraonidae
    - *Tetrao urogallus*
    - *Tetrastes bonasia*
  - ✓ Phasianidae
    - *Alectoris graeca*
- GRUIFORMES
  - ✓ Rallidae
    - *Porzana porzana*
    - *Porzana parva*
    - *Porzana pusilla*
    - *Crex crex*
- CHARADRIIFORMES
  - ✓ Recurvirostridae
    - *Himantopus himantopus*

- ✓ Burhinidae
  - *Burhinus oedicnemus*
- ✓ Scolopacidae
  - *Philomachus pugnax*
- ✓ Sternidae
  - *Sterna hirundo*
  - *Sterna albifrons*
  - *Chlidonias hybridus*
  - *Chlidonias niger*
- STRIGIFORMES
  - ✓ Strigidae
    - *Bubo bubo*
    - *Strix uralensis*
    - *Asio flammeus*
    - *Aegolius funereus*
- CAPRIMULGIFORMES
  - ✓ Caprimulgidae
    - *Caprimulgus europaeus*
- CORACIIFORMES
  - ✓ Alcedinidae
    - *Alcedo atthis*
  - ✓ Coraciidae
    - *Coracias garrulus*
- PICIFORMES
  - ✓ Picidae
    - *Picus canus*
    - *Dryocopus martius*
    - *Dendrocopos medius*
    - *Dendrocopos leucotos*
- PASSERIFORMES
  - ✓ Acrocephalidae
    - *Hippolais olivetorum*
    - *Acrocephalus melanopogon*
  - ✓ Alaudidae
    - *Calandrella brachydactyla*
    - *Melanocorypha calandra*
    - *Lullula arborea*

- ✓ Motacillidae
  - *Anthus campestris*
  
- ✓ Muscicapidae (Sylviinae)
  - *Sylvia nisoria*
  
- ✓ Muscicapidae (Muscicapinae)
  - *Ficedula albicollis*
  - *Ficedula parva*
  - *Ficedula semitorquata*
  
- ✓ Laniidae
  - *Lanius collurio*
  - *Lanius minor*
  - *Lanius nubicus*
  
- ✓ Corvidae
  - *Pyrrhocorax pyrrhocorax*
  
- ✓ Emberizidae (Emberizinae)
  - *Emberiza hortulana*

### 3 MIGRATORY SPECIES OF BIRDS NOT INCLUDED IN ANNEX I OF BIRDS DIRECTIVE WHICH DESERVE SAME TREATMENT

---

- Classification presented below is following birds Directive.

- ANSERIFORMES
  - ✓ Anatidae
    - *Anas strepera*
    - *Aythya ferina*
    - *Cygnus olor*
    - *Netta rufina*
  - ✓ Merginae
    - *Mergus merganser*
- CHARADRIIFORMES
  - ✓ Charadriidae
    - *Charadrius dubius*
    - *Gallinago gallinago*
    - *Vanellus vanellus*
  - ✓ Scolopacidae
    - *Scolopax rusticola*
- COLUMBIFORMES
  - ✓ Columbidae
    - *Streptopelia turtur*
- GRUIFORMES
  - ✓ Rallidae
    - *Fulica atra*
- PASSERIFORMES
  - ✓ Apodidae
    - *Tachymarptis melba*
  - ✓ Acrocephalidae
    - *Hippolais icterina*
  - ✓ Emberizidae
    - *Emberiza melanocephala*
  - ✓ Muscipidae

- *Cercotrichas galactotes*
- *Monticola solitarius*
- *Oenanthe hispanica*
  
- ✓ Laniidae
  - *Lanius senator*
  
- ✓ Locustellidae
  - *Locustella luscinioides*
  
- ✓ Phylloscopidae
  - *Phylloscopus orientalis*
  - *Phylloscopus sibilatrix*
  
- ✓ Remizidae
  - *Remiz pendulinus*
  
- ✓ Sylviidae
  - *Sylvia cantillans*
  - *Sylvia crassirostris*
  - *Sylvia melanocephala*

#### 4 SPECIES OF BIRDS NOT INCLUDED IN ANNEX I OF BIRDS DIRECTIVE AND ARE NOT MIGRATORY WHICH DESERVE STRICT PROTECTION

---

Scientific Name	Status in the country	Notes
<i>Ardea cinerea</i>	R	Rare breeder
<i>Columba oenas</i>	R	Habitat restricted species - old forests
<i>Emberiza melanocephala</i>	B	Mediterranean biome
<i>Emberiza schoeniclus</i>	W	Habitat restricted species - wetland reed beds
<i>Eremophila alpestris</i>	R	Alpine biome
<i>Larus michahellis</i>	R	few breeding sites only
<i>Montifringilla nivalis</i>	R	Alpine biome
<i>Nucifraga caryocatactes</i>	R	Habitat restricted high mountain species
<i>Panurus biarmicus</i>	R	Habitat restricted rare species reed beds
<i>Petronia petronia</i>	R	Mediterranean biome
<i>Phalacrocorax carbo</i>	R	Congregations and few breeding sites only
<i>Podiceps cristatus</i>	R	Congregations and few breeding sites only
<i>Podiceps nigricollis</i>	W	Congregations in winter
<i>Poecile montana</i>	R	specific breeding habitat declining fast
<i>Prunella collaris</i>	R	Alpine biome
<i>Pyrrhocorax graculus</i>	R	Alpine biome
<i>Sitta neumayer</i>	R	Mediterranean biome
<i>Tachybaptus ruficollis</i>	R	Significant concentrations in winter,
<i>Tichodroma muraria</i>	R	Habitat restricted species
<i>Turdus torquatus</i>	R	Alpine biome



The European Union's IPA programme  
TAIB 2011



# STRENGTHENING THE CAPACITIES FOR IMPLEMENTATION OF NATURA 2000

EuropeAid/136609/IH/SER/MK  
Version 1.1

Draft List of species of plants and animals  
listed in Annex II of the Habitats Directive  
for each of the two biogeographical re-  
gions: continental and alpine (D2.03)

09.02.2017



This project is funded by  
The European Union

A project implemented by Particip GmbH and  
its Consortium partners

Disclaimer:

*This report was produced by the Technical assistance to 'Strengthening the capacities for implementation of NATURA 2000', a project funded by the EU and implemented by a consortium led by Particip.*

*The report is the property of the European Commission. Reproduction is authorised for non-commercial purposes provided the source is acknowledged.*

*The contents of this publication are the sole responsibility of the Consortium providing the Technical assistance to 'Strengthening the capacities for implementation of NATURA 2000' and can in no way be taken to reflect the views of the European Union.*

*The report is the result of a collaborative effort by members of the Technical Assistance team, Dr Daniel BOGNER – Team Leader/Key Expert 1 and Expert in Natura 2000, Dr Jiri ZICHA – Key Expert 2/Deputy Team Leader and Legal Expert, Ernesto RUIZ – Key Expert 3 and Habitat and SPA Expert and the Consortium backstopping team.*

*Edited by Ernesto Ruiz and Daniel Bogner.*

© 2017 European Commission.



**Strengthening the capacities for implementation of NATURA 2000- EUROPEAID/136609/IH/SER/MK**

This project is funded by the European Union



---

**Type of report:** *DII.03 Draft List of species of plants and animals listed in Annex II of the Habitats Directive*

---

**Reporting period:** *01 March 2016 until 31 January 2017*

---

**First draft version submitted on:** *October 27, 2016*

---

**Comments received on:** *16.01.2017 from Dr. Svetozar Petkovski*

---

**Comments received on:**

---

**Final version submitted on:** *09.02.2017*

---

## Table of Contents

---

<b>TABLE OF CONTENTS</b>	<b>4</b>
<b>PROJECT SYNOPSIS</b>	<b>5</b>
<b>ABBREVIATIONS</b>	<b>7</b>
<b>1 INTRODUCTION</b>	<b>8</b>
<b>2 DRAFT LIST OF SPECIES OF PLANTS AND ANIMALS LISTED IN ANNEX II OF THE HABITATS DIRECTIVE</b>	<b>10</b>

## Project Synopsis

Programme Name	IPA Component I (TAIB 2011)		
Project Name	Strengthening the capacities for implementation of NATURA 2000		
Reference No:	EUROPEAID/ 136609/IH/SER/MK		
Contract Number	12-8709/1		
Project Duration	13,5 months including addendum of 45 days		
Project Commencement Date	01 February 2016		
Project End Date	17 March 2017		
Name:	Ministry of Environment and Physical Planning MoEPP	Ministry of Finance Central Financing and Contracting Department (CFCD)	Particip GmbH led Consortium
Role:	Beneficiary institution	Contracting Authority	Contractor
Address:	Goce Delcev 18, 1000 Skopje	Dame Gruev 12, 1000 Skopje	Merzhauerstr. 183, Freiburg, Germany
Telephone:	+389 75250234	+389 2 3255 409	+32 2 550 116 0
E-mail:	<i>jadrankaivanova@yahoo.com</i>	<i>radi- ca.koceva@finance.gov.mk llir.Umeri@finance.gov.mk</i>	<i>aleksandar.maksimovic@particip.eu</i>
Contact Person	Jadranka Ivanova , SPO, MoEPP	Radica Koceva, CFCD Head of Department llir Umeri, Monitoring Officer	Aleksandar Maksimovic, Project Direc- tor
Overall Objective	The overall objective of the project is to increase the effectiveness of the Beneficiary country's preparation for EU accession, in area of nature protection.		
Purpose	The purpose of this contract is to assist the Beneficiary country to carry out the preparation of establishment of Natura 2000 network		
Expected Results and Key Activities as per ToR	<ol style="list-style-type: none"> <li>1. Harmonization of National legislation with EU directives related to nature protection; Prepared draft Amendments to the Law on Nature Protection and other relevant implementing (primary and secondary) legislation, Prepared Plan for implementation of Birds and Habitat Directives;</li> <li>2. Assessment at national level of potential sites, according Birds and Habitat Directives, for NATURA 2000 Network and at least seven potential Natura 2000 sites proposed which would correspond to the requirements of Birds and Habitats Directives;</li> <li>3. GIS system for NATURA 2000 developed;</li> <li>4. Administrative capacity for implementation of nature protection legislation strengthened;</li> <li>5. Public awareness campaign for NATURA 2000 implemented.</li> </ol>		
Indicators to confirm the successful achievements of the project results	<p>Component I:</p> <ol style="list-style-type: none"> <li>1. Prepared gap assessment report for implementation and compliance with EU nature protection acquis,</li> <li>2. Recommendations for amendments of the Law of Nature Protection and other primary and secondary legislation,</li> <li>3. Prepared draft text of the Amendments to the Law on Nature Protection accompanied with Table of Concordance and prepared draft text of minimum two secondary legislation, with Table of Concordance.</li> </ol> <p>Component II:</p> <ol style="list-style-type: none"> <li>4. Prepared plan for implementation of Habitat and Birds Directives,</li> <li>5. Draft List of bird species from Annex I of the Birds Directive and other migratory birds regularly</li> </ol>		

	<p>occurring in the Beneficiary country,</p> <ol style="list-style-type: none"> <li>6. Draft List of habitat types listed in Annex I of the Habitats Directive,</li> <li>7. Draft List of species of plants and animals listed in Annex II of the Habitats Directive,</li> <li>8. Plan for future field research.</li> </ol> <p>Component III:</p> <ol style="list-style-type: none"> <li>9. Completing Standard Data Form Natura 2000 data form for seven sites and update of National Information System for Biodiversity with collected data,</li> <li>10. Study on development of Geographic Information System (GIS) for nature protected sites in compliance with Natura 2000 Network requirements,</li> <li>11. Digital GIS map of selected 7 proposal Natura 2000 network.</li> </ol> <p>Component IV:</p> <ol style="list-style-type: none"> <li>12. Plan for strengthening the administrative capacity for implementation of the NATURA 2000,</li> <li>13. Training plan with short and long term trainings for strengthening the administrative capacity for implementation of NATURA 2000,</li> <li>14. Training curricula for nature protection according to NATURA 2000 from short-term training plan.</li> </ol> <p>Component V:</p> <ol style="list-style-type: none"> <li>15. Development of Public information and consultation programme,</li> <li>16. Development and print of Public Information Tools on Natura 2000,</li> <li>17. Development of web page.</li> </ol>
Key Stakeholders	<ul style="list-style-type: none"> <li>▪ Ministry of Finance represented through CFCD;</li> <li>▪ Ministry of Environment and Physical Planning MoEPP;</li> <li>▪ Ministry of Agriculture, Forestry and Water Economy MAWRE;</li> <li>▪ National Parks (Mavrovo, Pelister and Galicica National Park);</li> <li>▪ Hydro-biological Institute, Ohrid;</li> <li>▪ Lake Prespa Nature Monument management authority, Municipality Resen;</li> <li>▪ Ministry of Transport;</li> <li>▪ Public Enterprise for State Roads ;</li> <li>▪ Macedonian Museum of Natural History;</li> <li>▪ Universities and Faculties in Beneficiary country;</li> <li>▪ Environmental Civil Society Organizations i.e. the Macedonian Ecological Society (MES), Bioeko, Bird Study and Protection Society (BSPSM), Peoni, Biosfera, Macedonian green center, Ecologists' movement of Macedonia Macedonian Society for Nature Conservation, etc)</li> <li>▪ Landowners;</li> <li>▪ Local authorities (Municipalities);</li> <li>▪ Business Sector;</li> <li>▪ Tourism Sector;</li> <li>▪ EU Delegation in Beneficiary Country;</li> <li>▪ Secretariat for European Affairs.</li> </ul> <p>Contracted consortium represented through Particip GmbH</p>
Target Groups	<p>Ministry of Environment and Physical Planning MoEPP          Other Ministries, state bodies and public science institutions          Authorities who manage protected areas and local authorities          NGOs and other professional organisations</p>
Geographical area to be covered	The whole territory of the country
Reporting Period	01 March 2016 until 31 January 2017
Author of the Report	Ernesto Ruiz, 09.02.2017
Version num. 1	

## Abbreviations

<b>BD</b>	Birds Directive
<b>CBD</b>	Convention on Biological Diversity
<b>ETC</b>	European Topic Centre
<b>EU</b>	European Union
<b>FCS</b>	Favourable Conservation Status
<b>GIS</b>	Geographical Information System
<b>HD</b>	Habitats Directive
<b>IBA</b>	Important Bird Area
<b>LNP</b>	Law on Nature Protection
<b>MoEPP</b>	Ministry of Environment and Physical Planning
<b>MoAFWE</b>	Ministry of Agriculture, Forestry and Water Economy
<b>MS</b>	Member State
<b>NBIS</b>	National Biodiversity Information System
<b>NGO</b>	Non-Governmental Organisation
<b>NIA</b>	Nature Impact Assessment
<b>NP</b>	National Park
<b>PA</b>	Protected Area
<b>pSCI</b>	Proposed Site of Community Importance
<b>RIA</b>	Regulatory Impact Assessment
<b>SAC</b>	Special Area of Conservation
<b>SCI</b>	Site of Community Importance
<b>SDF</b>	Standard Data Form
<b>SPA</b>	Special Protection Area
<b>ToR</b>	Terms of Reference
<b>WG</b>	Working Group

## 1 Introduction

### Activity II - Assessment at national level of potential sites according Birds and Habitats Directives for Natura 2000 Network

<b>Task</b>	<b>Task II-1:</b> Preparation of draft National reference list of species and habitat types
<b>Minimum outputs</b>	<ul style="list-style-type: none"> <li>▪ Interpretation manual (translated in local languages)</li> <li>▪ 3 Working groups for habitat types and flora</li> <li>▪ 7 Expert working groups for fauna (including birds) and flora</li> <li>▪ Draft List of bird species from Annex I of the Birds Directive and other migratory birds regularly occurring in the Beneficiary country (DII.01)</li> <li>▪ Draft List of habitat types listed in Annex I of the Habitats Directive for each of the two biogeographical regions: continental and alpine (DII.02)</li> <li>▪ Draft List of species of plants and animals listed in Annex II of the Habitats Directive for each of the two biogeographical regions: continental and alpine (DII.03)</li> </ul>

Because of the work done during the inception period, it was detected relevant information of great importance for the development of this project. We must highlight the work done for the development of the Emerald Network, supported by the Council of Europe and the European Environment Agency.

The work was carried out between 2003 and 2009 by a team of renowned Macedonian scientists who conducted a review in depth publications published to date regarding natural environment and wild species of the country.

The report IV of this work (2009) on the Emerald Network provided several lists of species and habitats, grouped into lists linked to the Bern Convention, and lists related to the European directives of Birds and Habitats. Therefore, thanks to this work we had, since the first moment, a preliminary list of habitats of Annex I, a list of species in Annex II of the Habitats Directive and a preliminary list of birds of Annex I of the Birds Directive.

Regarding wildlife, we established working groups for, birds, fish, herpetology, two groups for mammals (bats and other) and two groups for invertebrates (aquatic and terrestrial). We did not establish a working group for plants because the plant species listed in Annex I are very few and is more practical to link flora to habitat working groups, made up of ecologists, botanists and phytosociologists.

This report is to present partial results from Activity II Task 1: Preparation of draft National reference list of species and habitat types. More specifically it is addressed to present the List of Species of Annex II of the habitat directive.

This list of species is the result of the desk work and field work from the experts of the working groups of Bats, Mammals (no bats), Land Invertebrates, Water Invertebrates, Reptiles, Fishes, and Working group of Grasslands and Flora.

From the primary list of species, some of them have been confirmed and some others have been deleted or added. This is the result for this project, but we may expect some changes in the flora, and invertebrate's lists in further research in following years and also the addition or deletion of fishes in the fishes.

Detailed information on species, their distribution (range maps) in the country, plan for future field research, methodology of assessing, sorting and storing data will be provided in the report: DII.04 Plan for future field research.

Fishes have some problems as they have increased the number of species due to genetic analyses, so, species that were considered one are now several different species. The approach is to include all species listed in the Annex II and put between brackets the names of the new species derived from this one.

A special case is for *Salmo macrostigma*, In general *Salmo (trutta) macrostigma* in past was used for classifying various populations of brown trout occurring in Italian Peninsula, Sicily, Sardinia Corsica, Greece, Mediterranean drainages in Bulgaria, Turkey and in Morocco and Algeria (Kottelat and Freyhof 2007). According to the current knowledge *S. macrostigma* is not a valid name for European populations. According to Freyhof and Brooks (2011) the following taxons should be evaluated under this name: *Salmo letnica*, *Salmo ohridanus*, *Salmo farioides*, *Salmo macedonicus*, *Salmo pelagonicus* and *Salmo peristericus*.

In the past, in Ohrid and Prespa Lake Karaman (1924) recognize separate populations of *Rutilus rubilio* which now are accepted as valid taxons - *Rutilus prespensis* and *Rutilus ohridanus* (Maric and Radujkovic 2009; Tsoumani et al. 2014).  
(See Annexes from Plan for Future Field Research)

Related to other complex cases we have *Triturus* case. As the species registered in Habitats directive are *Triturus carnifex* and *Triturus karelinii* and this a legal binding text, we keep *Triturus carnifex (T macedonicus)* and *Triturus karelinii* because both species or those derived from them are present in the country.

*T. macedonicus* described as a variety of *Triturus karelinii*, later considered a subspecies of *Triturus carnifex*, and was elevated to species rank following molecular phylogenetic analysis in 2007. In 2007 Arntzen et al. proposed the *Triturus cristatus* complex to be revised based on the phylogeny of crested newts (*Triturus cristatus* superspecies) that was determined on nuclear and mitochondrial genetic characters. Later Wielstra et al. 2013 confirmed the justification for the *Triturus macedonicus* and *Triturus karelinii* to be separated species. This new development opened a new question of the distribution of these two species in our country since that the authors are referring that the *Triturus macedonicus* should be distributed in large part of Macedonia except on the most eastern parts of the country where *Triturus karelinii* occur. Since the detailed distribution data for these two species is lacking the precise areal of abundance is unknown as well possible hybrid zones.

## 2 Draft List of species of plants and animals listed in Annex II of the Habitats Directive

---

Draft List of species of plants and animals listed in Annex II of the Habitats Directive for each of the two biogeographical regions: continental and alpine, present in Macedonia

### ANIMALS

#### MAMMALS

##### ➤ CHIROPTERA

- ✓ Family Rhinolophidae (Horseshoe Bats)
  - *Rhinolophus blasii*
  - *Rhinolophus euryale*
  - *Rhinolophus ferrumequinum*
  - *Rhinolophus hipposideros*
  - *Rhinolophus mehelyi*
  
- ✓ Family Vespertilionidae (Evening Bats, Forest bats, Pipistrelles, Serotines)
  - *Barbastella barbastellus*
  - *Myotis blythii*
  - *Myotis capaccinii*
  - *Myotis emarginatus*
  - *Myotis myotis*
  
- ✓ Family Miniopteridae (Bent-winged Bats)
  - *Miniopterus schreibersi*

##### ➤ RODENTIA

- ✓ Sciuridae
  - *Spermophilus citellus (Citellus citellus)*
  
- ✓ Microtidae
  - *Dinaromys bogdanovi*

##### ➤ CARNIVORA

- ✓ Canidae
  - \* *Canis lupus*
- ✓ Ursidae
  - \* *Ursus arctos*
- ✓ Mustelidae
  - *Lutra lutra*
  - *Vormela peregusna*
- ✓ Felidae
  - *Lynx lynx (balcanicus)*

##### ➤ ARTIODACTYLA

- ✓ Bovidae
  - *Rupicapra rupicapra balcanica*



## REPTILES

- CHELONIA (TESTUDINES)
  - ✓ Testudinidae
    - *Testudo hermanni*
    - *Testudo graeca*
  - ✓ Emydidae
    - *Emys orbicularis*
  - ✓ Geoemydidae
    - *Mauremys caspica (rivulata)*
  
- SERPENTES
  - ✓ Colubridae
    - *Elaphe quatuorlineata*
    - *Elaphe situla*
  - ✓ Viperidae
    - *Vipera ursinii*

## AMPHIBIANS

- Anura
  - ✓ Salamandridae
    - *Triturus karelinii*
    - *Triturus carnifex (Triturus macedonicus)*
  
- Anura
  - ✓ Bombinatoridae
    - *Bombina variegata*

## FISH

- Order Petromyzoniformes
  - ✓ Family Petromyzontidae
    - *Eudontomyzon mariae*
    - *Eudontomyzon stankokaramani*
  
- Order Acipenseriformes
  - ✓ Family Acipenseridae
    - *\*Acipenser sturio*
  
- Order Clupeiformes
  - ✓ Family Clupeidae
    - *Alosa fallax*
  
- Order Salmoniformes
  - ✓ Family Salmonidae
    - *Slamo macrostigma (S. letnica, S. ohridanus, S. farioides, S. macedonicus, S. pelagonicus and S. peristericus)*

- *Salmo marmoratus*  
(*Salmo dentex*)
- Order Cypridiformes
  - ✓ Family Cyprinidae
    - *Barbus meridionalis*
    - *Gobio kessleri*
    - *Gobio uranoscopus*
    - *Phoxinellus minutus*
    - *Phoxinellus epiroticus*
    - *Rhodeus sericeus amarus*
    - *Rutilus rubilio* (*Rutilus prespensis* and *Rutilus ohridanus*)
  - ✓ Family Cobitidae
    - *Cobitis taenia*
    - *Sabanejewia aurata*
- Order Perciformes
  - ✓ Family Percidae
    - *Zingel balcanicus*

## INVERTEBRATES

### ARTHROPODS

#### CRUSTACEA

- Decapoda
  - \* *Austropotamobius torrentium*

#### INSECTA

- Coleoptera
  - *Bolbelasmus unicornis*
  - *Buprestis splendens*
  - *Carabus variolosus*
  - *Cerambyx cerdo*
  - *Lucanus cervus*
  - *Morimus funereus*
  - \**Osmoderma eremite*
  - *Probatiscus subrugosus*
  - \**Rosalia alpina*
- Lepidoptera
  - \**Callimorpha quadripunctaria*
  - *Eriogaster catax*
  - *Euphydryas aurinia*
  - *Dioszeghyana schmidtii*
  - *Hypodryas maturna*

- *Lycaena dispar*
- *\*Nymphalis vaualbum*
- *Polyommatus eroides*

➤ Odonata

- *Coenagrion mercuriale*
- *Coenagrion ornatum*
- *Cordulegaster heros*
- *Leucorrhinia pectoralis*
- *Lindenia tetraphylla*
- *Ophiogomphus cecilia*

➤ Orthoptera

- *Paracaloptenus caloptenoides*
- *Stenobothrus eurasius*

**MOLLUSCA**

➤ Bivalvia

- *Unio crassus*

**PLANTS**

➤ Angiospermae

- ✓ Family Boraginaceae
  - *Echium russicum*
- ✓ Family Droseraceae
  - *Aldrovanda vesiculosa*
- ✓ Family Scrophulariaceae
  - *Tozzia carpathica*
- ✓ Family Umbelliferae
  - *Angelica palustris*

➤ Bryophyta

- *Buxbaumia viridis*

## APPENDIX D

---

Table 1. General information on national Red Lists from economies in the South East Europe region.

Table 2. Technical information on national Red Lists from economies in the South East Europe region.

Table 3. National Red Lists/Books of Threatened Species in South-Eastern Europe (July 2014)

**Table 1. General information on national Red Lists from economies in the South East Europe region. The list is not exhaustive. ("---" indicates either that the Red List/Book was not at our disposal, or that the respective information was not available in English, which does not necessarily imply its absence in the original language texts.)**

Economy	Year	Title	Taxonomic group	Taxonomy ref.	Raw data collation	Publication type	Ref.	Link/Remarks
<b>Albania</b>	2013	Red List of wild flora and fauna	Flora and fauna	Unspecified	Unspecified	Paper	Ministerial Order No. 1280, 20.11.2013	<a href="http://www.nationalredlist.org/files/2015/06/Red-list-of-Albanian-flora-and-fauna-2013-MO-1280-20-11-2013.pdf">http://www.nationalredlist.org/files/2015/06/Red-list-of-Albanian-flora-and-fauna-2013-MO-1280-20-11-2013.pdf</a>
<b>Albania</b>	2008	Red Book of wild flora and fauna	Flora and fauna	---	---	---	---	
<b>Bulgaria</b>	2015	Red Data Book of the Republic of Bulgaria: Vol 1.	Plants and fungi	Unspecified	Unspecified	Book		<a href="http://e-ecodb.bas.bg/rdb/en/vol1/">http://e-ecodb.bas.bg/rdb/en/vol1/</a>
<b>Bulgaria</b>	2015	Red Data Book of the Republic of Bulgaria: Vol 2.	Animals	Unspecified	Unspecified	Book		<a href="http://e-ecodb.bas.bg/rdb/en/vol2/">http://e-ecodb.bas.bg/rdb/en/vol2/</a>
<b>Bulgaria</b>	2015	Red Data Book of the Republic of Bulgaria: Vol 3.	Natural habitats	---	---	Book		<a href="http://e-ecodb.bas.bg/rdb/en/vol3/">http://e-ecodb.bas.bg/rdb/en/vol3/</a>
<b>Bulgaria</b>	2009	Red List of Bulgarian vascular plants	Vascular plants	Literature	Unspecified	Scientific publication	(Anchev et al., 2009)	Species selection well described
<b>Bulgaria</b>	2008	Red List of the Bulgarian Algae I. Macroalgae	Macroalgae	Algae Database (2007); literature	Literature, personal data collections; Unspecified storage	Scientific publication	(Temniskova et al., 2008)	Shortcomings of IUCN Cat. for Algae pointed out
<b>Bulgaria</b>	2006	Red List of Fungi in Bulgaria	Fungi	Unspecified	Unspecified	Scientific publication	(Gyosheva et al., 2006)	

Economy	Year	Title	Taxonomic group	Taxonomy ref.	Raw data collation	Publication type	Ref.	Link/Remarks
<b>Bulgaria</b>	2006	Red List of the bryophytes in Bulgaria	Bryophytes	National checklist	Unspecified	Scientific publication	(Natcheva et al., 2006)	Evaluations done for populations across the Balkan region, not just in Bulgaria
<b>Croatia</b>	2016	Red Book of amphibians and Reptiles of Croatia	Amphibians; Reptiles	Literature	Central database collating from museum, literature, personal data collections	Book	(Jelić et al., 2016)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>
<b>Croatia</b>	2015	Red Book of Butterflies in Croatia	Butterflies	Literature	Unspecified	Book	(Šašić et al., 2015)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>
<b>Croatia</b>	2013	Red Data Book of Birds of Croatia	Birds	Birdlife Intl. checklist; Institute of Ornithology, Croatian Academy of Science and Arts	Atlas of breeding birds in Croatia, published and unpublished literature, personal data collections; Unspecified storage	Book	(Tutiš et al., 2013)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>
<b>Croatia</b>	2009	Red book of Croatian cave dwelling fauna	cave fauna	Unspecified	Unspecified	Book	(Ozimec et al., 2009)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>

Economy	Year	Title	Taxonomic group	Taxonomy ref.	Raw data collation	Publication type	Ref.	Link/Remarks
<b>Croatia</b>	2008	Red Book of Dragonflies of Croatia	Dragonflies	Unspecified; taxonomic uncertainty indicated	Literature, personal data collections; Unspecified storage	Book	(Belančić et al., 2008)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>
<b>Croatia</b>	2008	Red Book of Sea fishes of Croatia	Marine fish	Literature, Fishbase.org	Fisheries data; literature	Book	(Jardas et al., 2008)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>
<b>Croatia</b>	2008	Red Book of Croatian Fungi	Fungi	Unspecified	Unspecified	Book	(Tkalčec et al., 2008)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>
<b>Croatia</b>	2006	Red Book of freshwater fish of Croatia	Freshwater fish	Literature	Literature; unpublished data; personal observations by scientists and citizens; Unspecified storage	Book	(Mrakovčić et al., 2006)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>
<b>Croatia</b>	2006	Red Book of Mammals	Mammals	Unspecified	Literature, personal data collections; Unspecified storage	Book	(Antolović et al., 2006)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>

Economy	Year	Title	Taxonomic group	Taxonomy ref.	Raw data collation	Publication type	Ref.	Link/Remarks
<b>Croatia</b>	2005	Red Book of vascular flora of Croatia	Flora	Literature; CROFlora database; Croatian Checklist	literature, herbaria, observations; Unspecified storage	Book	(Nikolić and Topić, 2005)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>
<b>Croatia</b>	2003	Red Data Book of Birds of Croatia	Birds	Unspecified	Atlas of breeding birds in Croatia, literature, personal data collections; Unspecified storage	Book	(Radović et al., 2003)	<a href="http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2">http://www.haop.hr/hr/tematska-podrucja/prirodne-vrijednosti-stanje-i-ocuvanje/ugrozenost-vrsta-i-stanista/crveni-2</a>
<b>Federation of Bosnia and Herzegovina</b>	2016	Crvena lista gmizavaca (Chordata: Vertebrata: Reptilia) Federacije Bosne i Hercegovine	Reptiles	Unspecified	Unspecified	Scientific publication	(Lelo et al., 2016)	
<b>Federation of Bosnia and Herzegovina</b>	2013	Crvena lista gljiva	Fungi	Unspecified	Unspecified	Book	---	<a href="http://www.fmoit.gov.ba/download/Crvena%20lista%20gljiva%20FBiH.pdf">http://www.fmoit.gov.ba/download/Crvena%20lista%20gljiva%20FBiH.pdf</a>
<b>Federation of Bosnia and Herzegovina</b>	2013	Crvena lista flore	Flora	Unspecified	Unspecified	Book	---	<a href="http://www.fmoit.gov.ba/download/Crvena%20lista%20flore%20FBiH.pdf">http://www.fmoit.gov.ba/download/Crvena%20lista%20flore%20FBiH.pdf</a>
<b>Federation of Bosnia and Herzegovina</b>	2013	Crvena lista faune	Fauna	Unspecified	Unspecified	Book	---	<a href="http://www.fmoit.gov.ba/download/Crvena%20lista%20Faune%20FBiH.pdf">http://www.fmoit.gov.ba/download/Crvena%20lista%20Faune%20FBiH.pdf</a>



Economy	Year	Title	Taxonomic group	Taxonomy ref.	Raw data collation	Publication type	Ref.	Link/Remarks
<b>Greece</b>	2009	The Red Data Book of Rare and Threatened Plants of Greece	Flora	---	---	---	---	<a href="http://www.hbs.gr/en/activities/publications/24-1">http://www.hbs.gr/en/activities/publications/24-1</a>
<b>Greece</b>	2009	The Red Book of endangered animals of Greece	Fauna	---	---	Book	---	<a href="http://www.ypeka.gr/Default.aspx?tabid=518&amp;locale=el-GR&amp;language=en-US">http://www.ypeka.gr/Default.aspx?tabid=518&amp;locale=el-GR&amp;language=en-US</a>
<b>Kosovo</b>	2013	Red Book of vascular plants of Kosovo	Vascular plants	The Plant List; Euro+Med PlantBase; Flora Europea; Flora of the SR of Albania, Flora of Bulgaria, Flora of Serbia, Flora of Macedonia	Based on the EU Red List of Vascular Plants; Literature, national list of protected species, field observations; Unspecified storage	Book	(Millaku et al., 2013)	<a href="http://mmph-rks.org/repository/docs/LIBRI_I_KUQ_-_2016.12.09_641672.pdf">http://mmph-rks.org/repository/docs/LIBRI_I_KUQ_-_2016.12.09_641672.pdf</a>
<b>Macedonia</b>	2014	Red list of orthoptera of the Republic of Macedonia	Orthoptera	Orthoptera Species File (OSF)	Museum; Literature; Personal data collections; Unspecified storage	Scientific publication	(Lemonnier-Darcemont et al., 2014)	
<b>Macedonia</b>	2012	Contribution to the Macedonian Red List of Fungi	Fungi	Unspecified	Macedonian collection of Fungi (MCF); data base (MAK FUNGI); personal data collections	Scientific publication	(Karadelev and Rusevka, 2012)	

Economy	Year	Title	Taxonomic group	Taxonomy ref.	Raw data collation	Publication type	Ref.	Link/Remarks
<b>Macedonia</b>	2012	Red List Of Butterflies (Lepidoptera : Hesperioidea & Papilionoidea) For Republic Of Macedonia	Butterflies	Unspecified	Literature; museum; Unspecified storage	Scientific publication	(Krpač and Darcemont, 2012)	
<b>Serbia</b>	2017	The Red Book of Fauna of Serbia II – Birds	Birds	---	---	Book	---	Not yet published at the time of writing
<b>Serbia</b>	2015	The Red Book of Fauna of Serbia I – Amphibians	Amphibians	Literature	Database with data collated from museum, literature, personal data collections, international databases	Book	(Kalezić et al., 2015)	
<b>Serbia</b>	2015	The Red Book of Fauna of Serbia II - Reptiles	Reptiles	Literature	Collated from museum, literature, personal data collections, international databases; Unspecified storage	Book	(Tomović et al., 2015a)	
<b>Serbia</b>	2003	The Red Book of Serbian Butterflies	Butterflies	Literature	Unspecified	Book	(Jakšić, 2003)	
<b>Serbia</b>	1999	Red Book of the Flora of Serbia I	Flora	National flora checklist	Literature and herbarium; Unspecified storage	Book	(Stevanović et al., 1999)	
<b>Serbia and Montenegro</b>	2004	Bryophyte Red List of Serbia and Montenegro	Bryophytes	Unspecified	Literature and herbarium; Unspecified storage	Scientific publication	(Sabovljevic et al., 2004)	

Table 2. Technical information on national Red Lists from economies in the South East Europe region. The list is not exhaustive. ("---" indicates either that the Red List/Book was not at our disposal, or that the respective information was not available in English, which does not necessarily imply its absence in the original language texts.)

Economy	Year	Title	Classification system	Endemism	NA assignment	Assessment data model	Assessment data management	Assessment review	Assessment documentation	GIS
<b>Albania</b>	2013	Red List of wild flora and fauna	IUCN Cat. V3.1	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Absent	Absent
<b>Albania</b>	2008	Red Book of wild flora and fauna	---	---	---	---	---	---	---	---
<b>Bulgaria</b>	2015	Red Data Book of the Republic of Bulgaria: Vol 1.	IUCN Cat. V3.1	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Present	Maps
<b>Bulgaria</b>	2015	Red Data Book of the Republic of Bulgaria: Vol 2.	IUCN Cat. V3.1	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Present	Maps
<b>Bulgaria</b>	2015	Red Data Book of the Republic of Bulgaria: Vol 3.	Custom	---	---	---	---	---	---	---
<b>Bulgaria</b>	2009	Red List of Bulgarian vascular plants	IUCN Cat. V3.1; IUCN 2003 Regional guidelines	Unspecified	Unspecified	DD and NE criteria justified	Red List Assessment Questionnaire and Authority	Unspecified	Absent	
<b>Bulgaria</b>	2008	Red List of the Bulgarian Algae I. Macroalgae	IUCN Cat. V3.1; IUCN 2003 Regional guidelines	Unspecified	Unspecified	Unspecified; comments on DD and NE	Unspecified	Unspecified	Absent	Absent

Economy	Year	Title	Classification system	Endemism	NA assignment	Assessment data model	Assessment data management	Assessment review	Assessment documentation	GIS
<b>Bulgaria</b>	2006	Red List of Fungi in Bulgaria	IUCN Cat. V3.1; IUCN 2003 Regional guidelines	Unspecified	Unspecified	Unspecified	Red List Assessment Questionnaire and Authority	Unspecified	Absent	Absent
<b>Bulgaria</b>	2006	Red List of the bryophytes in Bulgaria	IUCN Cat. V3.1; IUCN 2003 Regional guidelines; Hallingbäck et al., 1998 for bryophytes;	Unspecified	Unspecified	Clearly defined DD and NE criteria	Unspecified	Unspecified	Absent	Absent
<b>Croatia</b>	2016	Red Book of amphibians and Reptiles of Croatia	IUCN Cat. V3.1; IUCN 2003 regional guidelines	No strict endemic species	Elaborated, but no population threshold	National habitat classification scheme; IUCN threat classification scheme	Unspecified	Unspecified	Present	Maps and analyses
<b>Croatia</b>	2015	Red Book of Butterflies in Croatia	IUCN Cat. V3.1; IUCN 2003 regional guidelines	Unspecified	Unspecified	Physis and national habitat classification schemes; IUCN Threat, Conservation Action, and Research Needed classification schemes;	Unspecified	Unspecified	Present	Maps

Economy	Year	Title	Classification system	Endemism	NA assignment	Assessment data model	Assessment data management	Assessment review	Assessment documentation	GIS
<b>Croatia</b>	2013	Red Data Book of Birds of Croatia	IUCN Cat. V3.1; IUCN 2003 regional guidelines	Unspecified	Well-elaborated	Well-described NA and NE criteria; time threshold for RE; IUCN Threat, Conservation Action, and Research Needed classification schemes;	Unspecified	Unspecified	Present	Maps
<b>Croatia</b>	2009	Red book of Croatian cave dwelling fauna	IUCN Cat. V3.1	Well-elaborated; not indicated which endemics are included	Decided by expert groups per cave region; re-examined by the overall Red Book editors	IUCN threat classification scheme	Unspecified	Unspecified	Present	Maps
<b>Croatia</b>	2008	Red Book of Dragonflies of Croatia	IUCN Cat. V3.1	Unspecified	Unspecified	Custom	Unspecified	Unspecified	Present	Maps
<b>Croatia</b>	2008	Red Book of Sea fishes of Croatia	IUCN Cat. V3.1; Regional guidelines by Gärdenfors (2001)	Well-elaborated; not indicated which endemics are included	Unspecified	National habitat classification scheme; IUCN Threat, Conservation Action, and Research Needed classification schemes;	IUCN Red List Assessment Questionnaire	Unspecified	Present	Maps

Economy	Year	Title	Classification system	Endemism	NA assignment	Assessment data model	Assessment data management	Assessment review	Assessment documentation	GIS
<b>Croatia</b>	2008	Red Book of Croatian Fungi	IUCN Cat. V3.1; Gärdenfors (2001)	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Present	Maps
<b>Croatia</b>	2006	Red Book of freshwater fish of Croatia	IUCN Cat. V3.1; Gärdenfors et al. (1999) mentioned but not applied	Briefly treated; region of endemism indicated;	Unspecified	IUCN Major Threats version 2.1; PHYSIS habitat classification; IUCN Conservation measures authority file 1.0;	Unspecified	Unspecified	Present	Maps
<b>Croatia</b>	2006	Red Book of Mammals	IUCN Cat. V3.1	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Present	Map
<b>Croatia</b>	2005	Red Book of vascular flora of Croatia	IUCN Cat. 1994; Regional guidelines by Gärdenfors et al. (1999)	Unspecified	Unspecified	Simplified Global Land Cover Characterisation; IUCN Authority files for threats and conservation action; CORINE habitat classification	RAMAS	Unspecified	Present	Maps
<b>Croatia</b>	2003	Red Data Book of Birds of Croatia	IUCN Cat. 1994; Gärdenfors et al. (1999)	Unspecified	Unspecified	IUCN Authority files for threats and conservation action; CORINE habitat classification	Unspecified	Unspecified	Present	Maps

Economy	Year	Title	Classification system	Endemism	NA assignment	Assessment data model	Assessment data management	Assessment review	Assessment documentation	GIS
<b>Federation of Bosnia and Herzegovina</b>	2016	Crvena lista gmizavaca (Chordata: Vertebrata: Reptilia) Federacije Bosne i Hercegovine	IUCN Cat. V3.1	Unspecified	Unspecified	Unspecified; criteria for species selection presented	Unspecified	Unspecified	Partially present	No
<b>Federation of Bosnia and Herzegovina</b>	2013	Crvena lista gljiva	IUCN Cat. V3.1	Unspecified	Unspecified	Unspecified; criteria for species selection presented	Unspecified	Unspecified	Partially present	Absent
<b>Federation of Bosnia and Herzegovina</b>	2013	Crvena lista flore	IUCN Cat. V3.1	Unspecified	Unspecified	Unspecified; criteria for species selection presented	Unspecified	Unspecified	Partially present	Absent
<b>Federation of Bosnia and Herzegovina</b>	2013	Crvena lista faune	IUCN Cat. V3.1	Unspecified	Unspecified	Unspecified; criteria for species selection presented	Unspecified	Unspecified	Partially present	Absent
<b>Greece</b>	2009	The Red Data Book of Rare and Threatened Plants of Greece	IUCN Cat. V3.1	---	---	---	---	---	Present	---
<b>Greece</b>	2009	The Red Book of endangered animals of Greece	IUCN Cat. V3.1; IUCN 2003 Regional guidelines	---	---	---	---	---	---	Maps

Economy	Year	Title	Classification system	Endemism	NA assignment	Assessment data model	Assessment data management	Assessment review	Assessment documentation	GIS
<b>Kosovo</b>	2013	Red Book of vascular plants of Kosovo	IUCN Cat. V3.1	Region of endemism indicated	Unspecified	IUCN threat classification scheme	RAMAS software	throughout assessment process	Present	Maps
<b>Macedonia</b>	2014	Red list of orthoptera of the Republic of Macedonia	IUCN Cat. V3.1; IUCN 2003 Regional guidelines	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Absent	Absent
<b>Macedonia</b>	2012	Contribution to the Macedonian Red List of Fungi	IUCN Cat. V3.1; IUCN 2003 Regional guidelines	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Absent	Absent
<b>Macedonia</b>	2012	Red List Of Butterflies (Lepidoptera : Hesperioidea & Papilionoidea) For Republic Of Macedonia	IUCN Cat. V3.1; IUCN 2003 Regional guidelines; custom scheme based on endemism and near-endemism	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Absent	Absent
<b>Serbia</b>	2017	The Red Book of Fauna of Serbia II – Birds	---	---	---	---	---	---	---	---



Economy	Year	Title	Classification system	Endemism	NA assignment	Assessment data model	Assessment data management	Assessment review	Assessment documentation	GIS
<b>Serbia</b>	2015	The Red Book of Fauna of Serbia I – Amphibians	IUCN Cat. V3.1; IUCN 2003 Regional guidelines; DELH assessment (Tomović et al., 2015b)	Unspecified	Unspecified	IUCN threat classification scheme, IUCN conservation measures classification scheme; national habitat classification scheme	Unspecified	Unspecified	Present	Maps
<b>Serbia</b>	2015	The Red Book of Fauna of Serbia II - Reptiles	IUCN Cat. V3.1; IUCN 2003 Regional guidelines; DELH assessment (Tomović et al., 2015b)	Unspecified	Unspecified	IUCN threat classification scheme, IUCN conservation measures classification scheme; national habitat classification scheme	Unspecified	Unspecified	Present	Maps and analyses
<b>Serbia</b>	2003	The Red Book of Serbian Butterflies	IUCN Cat. 1994; Gärdenfors 1997	Unspecified	Unspecified	Unspecified; criteria for species selection presented	Unspecified	Unspecified	Present	Maps

Economy	Year	Title	Classification system	Endemism	NA assignment	Assessment data model	Assessment data management	Assessment review	Assessment documentation	GIS
<b>Serbia</b>	1999	Red Book of the Flora of Serbia I	IUCN Cat. 1994; Gärdenfors (1996)	extensively treated; distinction between single-country and non-endemic;	criteria based on endemism, range size and threat level	Unspecified	Custom software; database presumed	Unspecified	Present	Maps and analyses
<b>Serbia and Montenegro</b>	2004	Bryophyte Red List of Serbia and Montenegro	IUCN Cat. 1994; Gärdenfors (1996)	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Absent	Absent

## REFERENCES

- Anchev, M., Apostolova, I., Assyov, B., Bancheva, S., Denchev, C., Dimitrov, D., Dimitrova, D., Evstatieva, L., Genova, E., Georgiev, V., Goranova, V., Gussev, C., Ignatova, P., Ivanova, D., Meshinev, T., Peev, D., Petrova, A., Petrova, A., Sopotlieva, D., Vladimirov, V., 2009. Red List of Bulgarian vascular plants. *Phytol. Balc.* 15, 63–94.
- Antolović, J., Flajšman, E., Frković, A., Grgurev, M., Grubešić, M., Hamidović, D., Holcer, D., Pavlinić, I., Vuković, M., Tvertković, N., 2006. Crvena knjiga Sisavaca Hrvatske (Red Book of Mammals of Croatia). Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Belančić, A., Bogdanović, T., Franković, M., Ljuština, M., Mihoković, N., Vitas, B., 2008. Crvena knjiga vretenaca Hrvatske (Red Book of Dragonflies of Croatia). Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Gärdenfors, U., 2001. Classifying threatened species at national versus global levels. *Trends Ecol. Evol.* 16, 511–516.
- Gärdenfors, U., 1996. Application of IUCN Red List Categories on a Regional Scale (Guest Essay), in: Baillie, J.E.M., Groombridge, B. (Eds.), 1996 Red List of Threatened Animals. IUCN (International Union for the Conservation of Nature), Gland, Switzerland and Cambridge, UK, pp. 63–66.
- Gärdenfors, U., Rodríguez, J.P., Hilton-Taylor, C., Hyslop, C., Mace, G.M., Molur, S., Poss, S., 1999. Draft Guidelines for the Application of IUCN Red List Criteria at National and Regional Levels. *Species* 31/32, 58–70.
- Gyosheva, M.M., Denchev, C.M., Dimitrova, E.G., Assyov, B., Petrova, R.D., Stoichev, G.T., 2006. Red List of fungi in Bulgaria. *Mycol. Balc.* 3, 81–87.
- Hallingbäck, T., Hodgetts, N.G., Raeymaekers, G., Schumacker, R., Sergio, S., Söderström, L., Stewart, N., Vana, J., 1998. Guidelines for application of the revised IUCN threat categories to bryophytes. *Lindbergia* 23, 6–12.
- Jakšić, P., 2003. Red Data Book of Serbian Butterflies. Institute for Nature Conservation of Serbia, Belgrade, Serbia.
- Jardas, I., Pallaoro, A., Vrgoč, N., Jukić-Peladić, S., Dadić, V., 2008. Crvena knjiga morskih riba Hrvatske (Red Book of Sea Fishes of Croatia). Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Jelić, D., Kuljerić, M., Koren, T., Treer, D., Šalamon, D., Lončar, M., Podnar Lešić, M., Janev Hutinec, B., Bogdanović, T., Mekinić, S., Jelić, K., 2016. Crvena knjiga vodozemaca i gmazova Hrvatske (Red Book of Amphibians and Reptiles of Croatia). Ministry of Environmental and Nature Protection State, State Institute for Nature Protection, Zagreb, Croatia.
- Kalezić, M., Tomović, L., Džukić, G. (Eds.), 2015. Crvena knjiga Faune Srbije I: Vodozemci (Red Book of Fauna of Serbia I: Amphibians). Institute for Nature Conservation of Serbia; Faculty of Biology, University of Belgrade, Belgrade, Serbia.

- Karadelev, M., Rusevka, K., 2012. Contribution to the Macedonian Red List of Fungi, in: Poceedings of the 4th Congress of Ecologists of Macedonia with International Participation, Ohrid, 12-15 October 2012. Macedonian Ecological Society, Skopje, Republic of Macedonia, pp. 68–73.
- Krpač, V.T., Darcemont, C., 2012. Red List Of Butterflies (Lepidoptera : Hesperioidea & Papilionoidea) For Republic Of Macedonia. Rev. Écologique (Terre Vie) 67.
- Lelo, S., Zimić, A., Šunje, E., 2016. Crvena lista gmizavaca (Chordata : Vertebrata : Reptilia) Federacije Bosne i Hercegovine. UZIZAŽ 12, 31–42.
- Lemonnier-Darcemont, M., Chobanov, D., Krpač, V.T., 2014. Red list of orthoptera of the Republic of Macedonia. Rev. d'Ecologie (La Terre la Vie) 69, 151–158.
- Millaku, F., Rexhepi, F., Krasniqi, E., Pajazitaj, Q., Mala, X., Berisha, N., 2013. Libri i kuq i florës vaskulare të Republikës së Kosovës (The Red Book of Vascular Flora of the Republic of Kosovo). Pristina, Kosovo.
- Mrakovčić, M., Brigić, A., Buj, I., Čaleta, M., Mustafić, P., Zanella, D., 2006. Crvena knjiga slatkovodnih riba Hrvatske (Red Book of freshwater fishes of Croatia). Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Natcheva, R., Ganeva, A., Spiridonov, G., 2006. Red List of the bryophytes in Bulgaria. Phytol. Balc. 12, 55–62.
- Nikolić, T., Topić, J. (Eds.), 2005. Crvena knjiga vaskularne flore Hrvatske. Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Ozimec, R., Bedek, J., Gottstein, S., Jalžić, B., Slapnik, R., Štamol, V., Bilandžija, H., Dražina, T., Kletečki, E., Komerički, A., Lukić, M., Pavlek, M., 2009. Crvena knjiga špiljske faune Hrvatske (Red Book of Croatian cave dwelling fauna). Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Radović, D., Kralj, J., Tutiš, V., Čiković, D., 2003. Crvena knjiga ugroženi ptica Hrvatske (Red Data Book of Birds of Croatia). Ministarstvo zaštite okoliša i prostornog uređenja, Zagreb, Croatia.
- Sabovljevic, M., Cvetić, T., Stevanovic, V., 2004. Bryophyte Red List of Serbia and Montenegro. Biodivers. Conserv. 13, 1781–1790. doi:10.1023/B:BIOC.0000029338.97776.66
- Šašić, M., Mihoci, I., Kučinić, M., 2015. Crvena knjiga danjih leptira Hrvatske (Red Book of Butterflies of Croatia). Ministry of Environmental and Nature Protection State, State Institute for Nature Protection, Zagreb, Croatia.
- Stevanović, V., Tatić, B., Janković, M.M., Diklić, N., Jovanović, B., Vasić, O., Jovanović, Slobodan, Niketić, M., Butorac, B., Boža, P., 1999. The Red Data Book of Flora of Serbia. Ministry of Environment of the Republic of Serbia; Faculty of Biology, University of Belgrade; Institution for Protection of Nature of the Republic of Serbia, Belgrade, Serbia.

- Temniskova, D., Stoyneva, M.P., Kirjakov, I.K., 2008. Red List of the Bulgarian algae . I . Macroalgae. *Phytol. Balc.* 14, 193–206.
- Tkalčec, Z., Mešić, A., Matočec, N., Kušan, I., 2008. Crvena knjiga Gljiva Hrvatske (Red Book of Croatian Fungi). Ministry of Culture, State Institute for Nature Protection, Zagreb, Croatia.
- Tomović, L., Kalezić, M., Džukić, G. (Eds.), 2015a. Crvena knjiga Faune Srbije II: Gmizavci (Red Book of Fauna of Serbia II: Reptiles). Institute for Nature Conservation of Serbia; Faculty of Biology, University of Belgrade, Belgrade, Serbia.
- Tomović, L., Urošević, A., Vukov, T., Ajtić, R., Ljubisavljević, K., Krizmanić, I., Jović, D., Labus, N., Đorđević, S., Kalezić, M.L., Džukić, G., Luiselli, L., 2015b. Threatening levels and extinction risks based on distributional, ecological and life-history datasets (DELH) versus IUCN criteria: example of Serbian reptiles. *Biodivers. Conserv.* 24, 2913–2934. doi:10.1007/s10531-015-0984-7
- Tutiš, V., Kralj, J., Radović, D., Čiković, D., Barišić, S. (Eds.), 2013. Crvena knjiga ptica Hrvatske. Ministry of Environmental and Nature Protection State, State Institute for Nature Protection, Zagreb, Croatia.

# National Red Lists/Books of Threatened Species in South-Eastern Europe

## July 2014

The information below has been kindly provided by responsible nature conservation authorities.

<b>Albania</b>				
Red Lists/Books of Threatened Species are elaborated, no complete information available				
<b>Bosnia and Herzegovina</b>				
Federation of Bosnia and Herzegovina - Red List of flora , Red List of Fauna, Red List of Fungi <a href="http://www.fmoit.gov.ba/ba/page/81/zascarontita-prirode#">http://www.fmoit.gov.ba/ba/page/81/zascarontita-prirode#</a>				
Republic of Srpska – no detailed Red Lists/Books of Threatened Species				
<b>Bulgaria</b>				
Taxonomic group	Year	Author(s)	Available online	Published by
Vascular plants	2009.	Petrova, A. & Vladimirov, V. (eds)	<a href="http://www.bio.bas.bg/~phytolbalcan/PDF/15_1/contents.html">http://www.bio.bas.bg/~phytolbalcan/PDF/15_1/contents.html</a>	Institute of Biodiversity and ecosystem research
Plants § Fungi	2011.	Peev, D. (Ed.)		Ministry of Environment and Water
<b>Croatia - Red Lists of Threatened Species</b>				
Taxonomic group	Year	Author(s)	Available online	Published by
Mammals	2006.	Tvrković, N., Antolović, J., Flajšman, E., Frković, A., Grgurev, M., Grubešić, M., Hamidović, D., Holcer, D., Pavlinić, I. & Vuković, M.	<a href="http://www.dzpp.hr/dokumenti_upload/20140124/dzpp201401241534360.pdf">http://www.dzpp.hr/dokumenti_upload/20140124/dzpp201401241534360.pdf</a>	State Institute for Nature Protection
Freshwater fish	2006.	Mrakovčić, M., Brigić, A., Buj, I., Čaleta, M., Mustafić, P. & Zanella, D.	<a href="http://www.dzpp.hr/dokumenti_upload/20140124/dzpp201401241326500.pdf">http://www.dzpp.hr/dokumenti_upload/20140124/dzpp201401241326500.pdf</a>	State Institute for Nature Protection
Freshwater and Brackishwater Crustaceans	2011.	Sanja Gottstein, Sandra Hudina, Andreja Lucić, Ivana Maguire, Ivančica Ternjej, Krešimir Žganec	<a href="http://www.dzpp.hr/dokumenti_upload/20140113/dzpp201401131029240.pdf">http://www.dzpp.hr/dokumenti_upload/20140113/dzpp201401131029240.pdf</a>	State Institute for Nature Protection
Freshwater and Terrestrial Gastropods	2013.	Lajtner, J., Štamol, V. & Slapnik, R.	<a href="http://www.dzpp.hr/dokumenti_upload/20140102/dzpp201401021318200.pdf">http://www.dzpp.hr/dokumenti_upload/20140102/dzpp201401021318200.pdf</a>	State Institute for Nature Protection
Birds	2013.	Vesna Tutiš, Jelena Kralj, Dragan Radović, Davor Čiković, Sanja Barišić	<a href="http://www.dzpp.hr/dokumenti_upload/20131230/dzpp201312301612020.pdf">http://www.dzpp.hr/dokumenti_upload/20131230/dzpp201312301612020.pdf</a>	State Institute for Nature Protection
Butterflies	2013.	Šašić, M., Mihoci, I. & Kučinić, M.	<a href="http://www.dzpp.hr/dokumenti_upload/20130909/dzpp201309091608230.pdf">http://www.dzpp.hr/dokumenti_upload/20130909/dzpp201309091608230.pdf</a>	State Institute for Nature Protection
Amphibians and Reptiles	2012.	Dušan Jelić, Marija Kuljerić, Toni Koren, Dag Treer, Dragica Šalomon, Mila Lončar, Martina Podnar Lešić, Biljana Janev Hutinec, Tomislav Bogdanović, Stjepan Mekinić, Katja Jelić	<a href="http://www.dzpp.hr/dokumenti_upload/20130902/dzpp201309020835130.pdf">http://www.dzpp.hr/dokumenti_upload/20130902/dzpp201309020835130.pdf</a>	State Institute for Nature Protection
Cave dwelling fauna	2009.	Roman Ozimec, Jana Bedek, Sanja Gottstein, Branko Jalžić, Rajko Slapnik, Vesna Štamol, Helena Bilandžija, Tvrko Dražina, Eduard Kletečki, Ana Komerički, Marko Lukić, Martina Pavlek	<a href="http://www.dzpp.hr/dokumenti_upload/20111125/dzpp201111251131540.pdf">http://www.dzpp.hr/dokumenti_upload/20111125/dzpp201111251131540.pdf</a>	State Institute for Nature Protection

Sea Fishes	2008.	Ivan Jardas, Armin Pallaoro, Nedo Vrgoč, Stjepan Jukić-Peladić, Vlado Dadić	<a href="http://www.dzpz.hr/dokumenti_upload/20110527/dzpz201105270947440.pdf">http://www.dzpz.hr/dokumenti_upload/20110527/dzpz201105270947440.pdf</a>	State Institute for Nature Protection
Sea algae and sea grasses	2011	Boris Antolić, Vedran Nikolić, Ante Žuljević	<a href="http://www.dzpz.hr/dokumenti_upload/20140613/dzpz201406131540210.pdf">http://www.dzpz.hr/dokumenti_upload/20140613/dzpz201406131540210.pdf</a>	State Institute for Nature Protection
Lichens	2008.	Siniša Ozimec, Anamarija Partl	<a href="http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141259032.pdf">http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141259032.pdf</a>	State Institute for Nature Protection
Stoneflies	2007.	Aleksandar Popijač	<a href="http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141259031.pdf">http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141259031.pdf</a>	State Institute for Nature Protection
Sea anemones	2007.	Petar Kružić	<a href="http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141259030.pdf">http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141259030.pdf</a>	State Institute for Nature Protection
Ground beetles	2007.	Snježana Vujčić-Karlo, Andreja Brigić, Bože Kokan, Lucija Šerić Jelaska, Boris Hrašovec	<a href="http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141257453.pdf">http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141257453.pdf</a>	State Institute for Nature Protection
Dragonflies	2008.	Anita Belančić, Tomislav Bogdanović, Matija Franković, Maša Ljuština, Nino Mihoković, Boria Vitas	<a href="http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141256232.pdf">http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141256232.pdf</a>	State Institute for Nature Protection
Fungi	2008.	Zdenko Tkalčec, Armin Mešić, Neven Matočec, Ivana Kušan	<a href="http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141250262.pdf">http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141250262.pdf</a>	State Institute for Nature Protection
Vascular Flora	2005.	Toni Nikolić & Jasenka Topić	<a href="http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141250261.pdf">http://www.dzpz.hr/dokumenti_upload/20100414/dzpz201004141250261.pdf</a>	State Institute for Nature Protection

#### Croatia - Red Books of Threatened Species

Taxonomic group	Year	Author(s)	Available online	Published by
Mammals	2006.	Jasna Antolović, Emil Flajšman, Alojzije Frković, Marin Grgurev, Marijan Grubešić, Daniela Hamidović, Draško Holcer, Igor Pavlinić, Marijana Vuković, Nikola Tvrtković (author and editor)	<a href="https://www.dropbox.com/s/k8xi0wei503xa5f/Crvena_knjiga_sisavaca_WEB.pdf">https://www.dropbox.com/s/k8xi0wei503xa5f/Crvena_knjiga_sisavaca_WEB.pdf</a>	State Institute for Nature Protection
Freshwater fish	2006.	Milorad Mrakovčić, Andreja Brigić, Ivana Buj, Marko Čaleta, Perica Mustafić, Davor Zanella	<a href="https://www.dropbox.com/s/982ksxcvhtbvp43/Crvena_knjiga_slatkovodnih_riba-final_WEB.pdf">https://www.dropbox.com/s/982ksxcvhtbvp43/Crvena_knjiga_slatkovodnih_riba-final_WEB.pdf</a>	State Institute for Nature Protection
Birds	2013.	Tutiš, V., Kralj, J., Radović, D., Čiković, D., Barišić, S.	<a href="https://www.dropbox.com/s/lzklzdjss9tf4/CK_Ptica_2013_WEB.pdf">https://www.dropbox.com/s/lzklzdjss9tf4/CK_Ptica_2013_WEB.pdf</a>	State Institute for Nature Protection
Butterflies	2013. (in preparation)	Šašić, M., Mihoci, I. & Kučinić, M.		State Institute for Nature Protection
Amphibians and Reptiles	2012.	Dušan Jelić, Marija Kuljerić, Toni Koren, Dag Treer, Dragica Šalamon, Mila Lončar, Martina Podnar Lešić, Biljana Janev Hutinec, Tomislav Bogdanović, Stjepan Mekinić, Katja Jelić	<a href="https://www.dropbox.com/s/lkhvb4xtq5mq86/CK_vodozemaca_i_gmazova_WEB.pdf">https://www.dropbox.com/s/lkhvb4xtq5mq86/CK_vodozemaca_i_gmazova_WEB.pdf</a>	State Institute for Nature Protection
Cave dwelling fauna	2009.	Roman Ozimec, Jana Bedek, Sanja Gottstein, Branko Jalžić, Rajko Slapnik, Vesna Štamol, Helena Bilandžija, Tvrtko Dražina, Eduard Kletečki, Ana Komerički, Marko Lukić, Martina Pavlek	<a href="https://www.dropbox.com/s/g62ntdqil8z2mc5/CK%20spiljske%20faune%20WEB.pdf">https://www.dropbox.com/s/g62ntdqil8z2mc5/CK%20spiljske%20faune%20WEB.pdf</a>	State Institute for Nature Protection
Sea Fishes	2008.	Ivan Jardas, Armin Pallaoro, Nedo Vrgoč, Stjepan Jukić-Peladić, Vlado Dadić	<a href="https://www.dropbox.com/s/8t44wmsktel5lbu/Crvena_knjiga_morskih_riba_WEB.pdf">https://www.dropbox.com/s/8t44wmsktel5lbu/Crvena_knjiga_morskih_riba_WEB.pdf</a>	State Institute for Nature Protection

Dragonflies	2008.	Anita Belančić, Tomislav Bogdanović, Matija Franković, Maša Ljuština, Nino Mihoković, Boria Vitas	<a href="http://www.scribd.com/fullscreen/59598727?access_key=key-1zzyd2snq2mssku38s56">http://www.scribd.com/fullscreen/59598727?access_key=key-1zzyd2snq2mssku38s56</a>	State Institute for Nature Protection
Fungi	2008.	Zdenko Tkalčec, Armin Mešić, Neven Matočec, Ivana Kušan	<a href="https://www.dropbox.com/s/mupbib5tm6g3hx9/CK_gljive_WEB.pdf">https://www.dropbox.com/s/mupbib5tm6g3hx9/CK_gljive_WEB.pdf</a>	State Institute for Nature Protection
Vascular Flora	2005.	Toni Nikolić & Jasenka Topić	<a href="https://www.dropbox.com/s/5p54ve0skgq2rc6/Crvena_knjiga_flore_WEB.pdf">https://www.dropbox.com/s/5p54ve0skgq2rc6/Crvena_knjiga_flore_WEB.pdf</a>	State Institute for Nature Protection
<b>Macedonia - Red Lists/Books of Threatened Species</b>				
no detailed Red Lists/Books of Threatened Species				
<b>Montenegro - Red Lists/Books of Threatened Species</b>				
no detailed Red Lists/Books of Threatened Species				
<b>Romania - Red Books of Threatened Species</b>				
<b>Taxonomic group</b>	<b>Year</b>	<b>Author(s)</b>	<b>Available online</b>	<b>Published by</b>
Vertebrates (mammals, birds, reptiles, amphibians, fishes)	2005.	Botnariuc, N., Tatole, V. (eds.); Murariu, D. (mammals); Munteanu, D. (birds); Iftime, A. (reptiles, amphibians); Bănărescu, P. (fishes)		“Grigore Antipa” National Museum of Natural History; the Romanian Academy
Vascular plants	2009.	Dihoru G. & Negrean G.(eds.);		Ed. Academiei Romane (Romanian Academy)
<b>Serbia - Red Lists of Threatened Species</b>				
<b>Taxonomic group</b>	<b>Year</b>	<b>Author(s)</b>	<b>Available online</b>	<b>Published by</b>
Preliminary list of species for the Red List of vertebrates of Serbia	1990-1991	Vasić, V., Džukić, G., Janković, D., Simonov, N., Petrov, B. & Savić, I.		Nature protection
<b>Serbia - Red Books of Threatened Species</b>				
<b>Taxonomic group</b>	<b>Year</b>	<b>Author(s)</b>	<b>Available online</b>	<b>Published by</b>
Red Book of flora of Serbia. 1, Extinct and Critically Endangered taxa	1999.	Stevanović, V. (ed.)		Ministry of Environment of Republic of Serbia, Faculty of Biology University of Belgrade, Institute for Nature Conservation of Serbia, Belgrade.
Red book of daily butterflies of Serbia - Lepidoptera: Hesperioidea i Papilionoidea	2003.	Jakšić, P.		Institute for Nature Conservation of Serbia
<b>Slovenia - Red Lists of Threatened Species</b>				
<b>Taxonomic group</b>	<b>Year</b>	<b>Author(s)</b>	<b>Available online</b>	<b>Published by</b>
Vascular Plants	1989.	Tone Wraber, Peter Skoberne	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-0LT2H8JD/?query=%27keywords%3dvarstvo+narave%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-0LT2H8JD/?query=%27keywords%3dvarstvo+narave%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Mammalia	1992.	Boris Kryštufek	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Endangered Aves	1992.	Janez GREGORI, Sergej D. MATVEJEV	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage



Reptilia	1992.	Narcis MRŠIČ	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Amphibia	1992.	Boris SKET	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Macrolepidoptera	1992.	Jan CARNELUTTI	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Insecta, Trichoptera	1992.	Ciril KRUŠNIK	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Pisces and Cyclostomata	1992.	Meta Povž	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Mecoptera	1992.	Dušan DEVETAK	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Neuroptera s. 1	1992.	Dušan DEVETAK	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Heteroptera	1992.	Andrej Gogala	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Orthopteroidea	1992.	Sergej D. MATVEJEV	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Diplopoda (Myriapoda)	1992.	Narcis MRŠIČ	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Chilopoda	1992.	Ivan KOS	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Freshwater Malacostraca: (Isopoda aquatica, Amphipoda, Decapoda)	1992.	Boris SKET	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Isopoda terrestria (Crustacea)	1992.	Franc POTOČNIK	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Freshwater Entomostraca (Anostraca, Cladocera, Copepoda, Ostracoda)	1992.	Boris SKET, Anton BRANCELJ	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Aranea	1992.	Anton POLENEC	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage

Hirudinea	1992.	Boris SKET	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Lumbricidae (Oligochaeta)	1992.	Narcis MRŠIČ	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Terrestrial and Freshwater Mollusca	1992.	Jože BOLE	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Freshwater Hydrozoa	1992.	Milan VELIKONJA	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Inhabitants of Hypogean Waters	1992.	Boris SKET	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-4IPYAGLM/?query=%27keywords%3dvarstvo+narave+1992%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Mosses (Musci)	1992.	Andrej MARTINČIČ	<a href="http://www.dlib.si/details/URN:NBN:SI:DOC-8I6VXFUS/?query=%27keywords%3dvarstvo+narave+18%27&amp;pageSize=25">http://www.dlib.si/details/URN:NBN:SI:DOC-8I6VXFUS/?query=%27keywords%3dvarstvo+narave+18%27&amp;pageSize=25</a>	Institute for the Protection of Natural and Cultural Heritage
Breeding birds	1994.	Bračko Franc, Sovinc Andrej, Štumberger Borut, Trontelj Peter, Vogrin Milan	<a href="http://www.dlib.si/details/URN:NBN:SI:doc-UK9J56DW/">http://www.dlib.si/details/URN:NBN:SI:doc-UK9J56DW/</a>	Društvo za opazovanje in proučevanje ptic Slovenije (DOPPS)
Butterflies	1996.	Tatjana Čelik, Franc Rebeušek		Slovensko entomološko društvo Štefana Michielija
Dragonflies	1997.	Mladen Kotarac		Miklavž na Dravskem polju : Centre for Cartography of Fauna and Flora
Bats	1997.	Mladen Kotarac		Miklavž na Dravskem polju : Centre for Cartography of Fauna and Flora

The views expressed in this publication do not necessarily reflect those of IUCN and the responsibility for the content of the published information remains with the authors.

Whilst IUCN Programme Office for South-Eastern Europe has used reasonable endeavors to ensure that the information provided is accurate, it reserves the right to make corrections and does not warrant that its content is accurate or complete. IUCN Programme Office for South-Eastern Europe accepts no liability for any errors, misprints or omissions herein (whether negligent or otherwise). The designation of geographical entities in this bulletin, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN concerning the legal status of any country, territory, or area, or of its authorities, or concerning the definition of its frontiers or boundaries. For the purpose of this publication, the name Macedonia is used to refer to The former Yugoslav Republic of Macedonia. The information in this bulletin is provided free-of-charge; therefore you agree by receiving it that this disclaimer is reasonable.

Edited and published by: IUCN Programme Office for South-Eastern Europe