The following supplements accompany the article

National and subnational Red Lists in European and Mediterranean countries: current state and use for conservation

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Supplement 1. Information about the questionnaire

A contact database of people involved in biodiversity conservation in each country of the study was elaborated from the literature and the internet (CBD national focal points, European agency for the environment, IUCN members, Birdlife network, etc.). 654 persons from 53 countries were contacted. We received answers from 261 individuals (40%) who helped us identify 351 persons actually involved in Red Lists of Threatened Species and conservation strategies in the 53 countries of the study. Invitations to the online questionnaire were sent to those 351 people from public bodies, research institutions, NGO's, etc. (from 2 to 19 people per country). The questionnaire ran for 6 weeks from May to June 2014 and a reminder was sent every week. We received 322 answered questionnaire (92% of invitations), of which 115 were fully completed (36% of invitations). We selected 134 answered questionnaires, which were the most complete and relevant ones. We synthesized the answers for each country following a standardized protocol (Supplement S3).
The questionnaire included 398 conditional questions (from 50 to 262 questions to answer), all of which were given a unique code. There were only 36 open questions. The majority of questions were closed with simple questions (answered by "yes" or "no") and multiple choice questions (a list of possible answers), some of which were mandatory and others non-mandatory. The online questionnaire was built with Limesurvey, an open source survey software, with French and English options (http://questionnaires.mnhn.fr/index.php/818245/lang-en *NB The survey is now closed. This is a sample questionnaire only).*

Supplement 2. Analysis of the data quality

Running a survey by questionnaire generates significant bias caused by the fractional knowledge and interpretation of respondents. In order to account for this bias in the analysis of results, we implemented a grading protocol which allowed us to grade profiles and answers and estimate the confidence in our results.

1. Protocol for the evaluation of the quality of answers to the questionnaire

a. Evaluation of respondents profiles

Several respondents answered for each country. We graded each of them according to their professional profile and the quality of their answers. This grading allows us to prioritize the information for the elaboration of the synthesis of answers by country.

1	Valid profile: relevant position and/or organization, recommendations from other professionals Documented answers: bibliographic references and comments	***Answers retained on priority***
2	A few inconsistencies detected in the answers Large number of « I don't know »	***Information needs to be confirmed***
3	Strong inconsistencies of answers Majority of « I don't know » More than 75% incomplete questionnaire	***Answers stored for informative purposes only***

Table S1. Grading of respondents profiles

b. Protocol of synthesis and evaluation of answers per country

In order to facilitate comparisons between countries, we produced a synthesis of the answers of respondents for each country. We implemented a protocol which allows selecting the synthesis answer and evaluate its confidence level according to the following confidence indices (CI):

CI	Protocol of synthesis and evaluation	Comments
A	- Bibliographic references and/or validation by experts - Comments to support the answer - All respondents from the same country answered identically	***Good confidence***
B	Only one respondent have answered the question for a country (this respondent has a valid profile and consistent answers)	***Information needs to be confirmed***

C	- One single respondent : inconsistencies
	- Several respondents with different answers :
	  - Choice of the majority answer
	  - For questions regarding the current state of RLs and conservation program: when we are confronted to different answers (« Yes » and « No » or « No » and « No but we plan to »), we always choose the most positive answers as one might not be aware of a program/policy.
	  - Choice of the most relevant answer
	  - Choice of answers from respondents with a profile 1
		Low level of confidence

Table S2. Confidence indices of answers

c. **Other rules:**

- Questionnaires with more than 90% unanswered questions were not included in the analyses.
- Questionnaire with strong inconsistencies were deleted.
- Answers with inconsistencies were confirmed by emailing the respondent.
- The choice of answer « I don't know », open questions and comments were not graded for confidence.
- A few respondents had technical difficulties with the questionnaire and filled out two of them. If we received two answers from one respondent (one complete and one incomplete), we kept the completed one with its comments and attachments. If there was just one respondent for one country and two inconsistent answers, the answer was graded B.
- All open questions, comments and attachments were used for the qualitative analysis.
- The precautionary principle as adopted: if doubt remains, the lowest grade was applied.

NB: Nine experts working in the Euro-Mediterranean region were consulted to validate and/or complete our results.

Survey data analysis

We analyzed the results of our study according to the grading system in order to improve our interpretation of results.

a. Respondents

a.1. Number of respondents per country

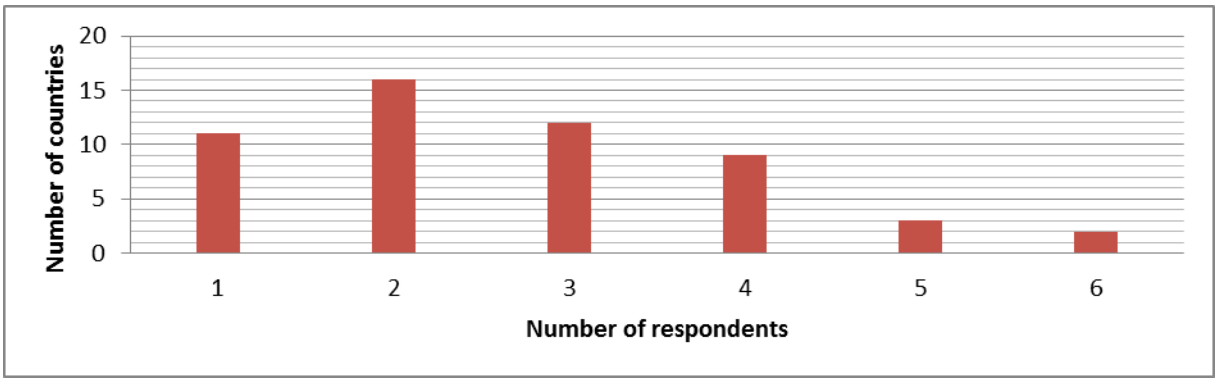
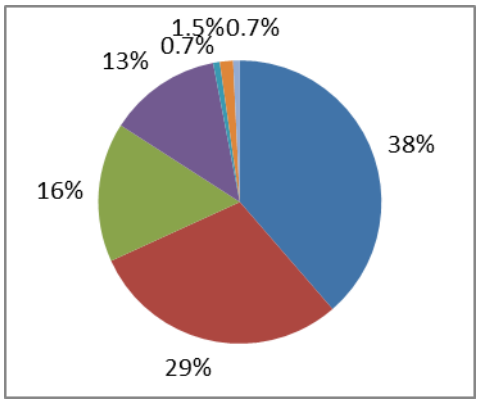


Fig. S1. Number of respondents per country

From 1 to 6 respondents per country answered the questionnaire, leading to a median of 2.5 respondents per country. 79.2% of countries have at least two respondents (based on 134 respondents from 53 countries).

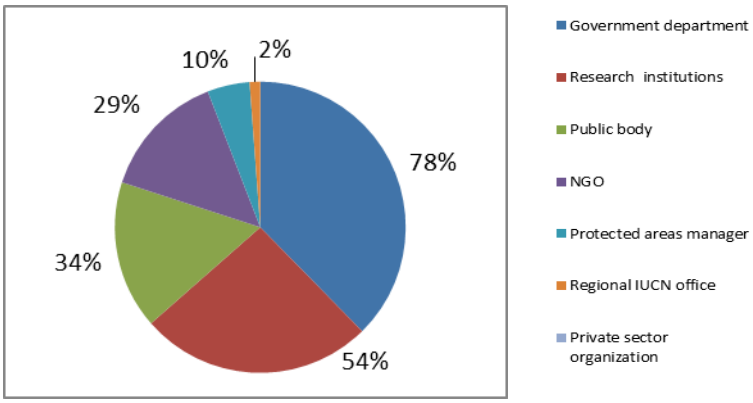
a.2. Profile of respondents

Profile of respondents



On a percentage of 134 respondents.

Profile of NRL coordinators



As a percentage of 41 countries that have developed NRL. The sum of percentage exceeds 100% because this is a multiple choice question.

Fig. S2. Profile of respondents and national Red Lists of Threatened Species coordinators

The profile of respondents matched the profile of NRLTS coordinators in the studied countries, which validated our targeting strategy.

a.3. Evaluation of the profile of respondents

- Profile 1 (valid profile): 64%
- Profile 2 (answers need to be confirmed) : 23%
- Profile 3 (inconsistent answers): 13%
  As a percentage of 134 respondents.

We estimated that a large majority (64%) of respondents were trustworthy. They occupy a position in an organization that is relevant to our study and were recommended by other conservation stakeholders. Moreover, they supported their answers through comments and attachments.

b. Number of questions answered per country

There are 398 questions in the questionnaire. Most of them are conditional (questions to be answered depend on the previous answer). One can only answer a maximum of 252 questions, if every comment and upload options were filled. The average number of questions answered by country was 102**.**

c. Confidence index analysis

We had great confidence in 45% of the answers per country (A) and 36% of the answers needed to be confirmed (B). Only 18% of the answers presented a low rate of confidence (C). The good confidence index for countries (A) was not correlated to the number of respondents per country ($R^2 = 0.3672$; $p<0.92$) or to the number of questions answered by country ($R^2 = 0.0002$; $p<0.0001$).

Supplement 3. Grouping of countries according to their conservation strategies and descriptive variables (RDA)

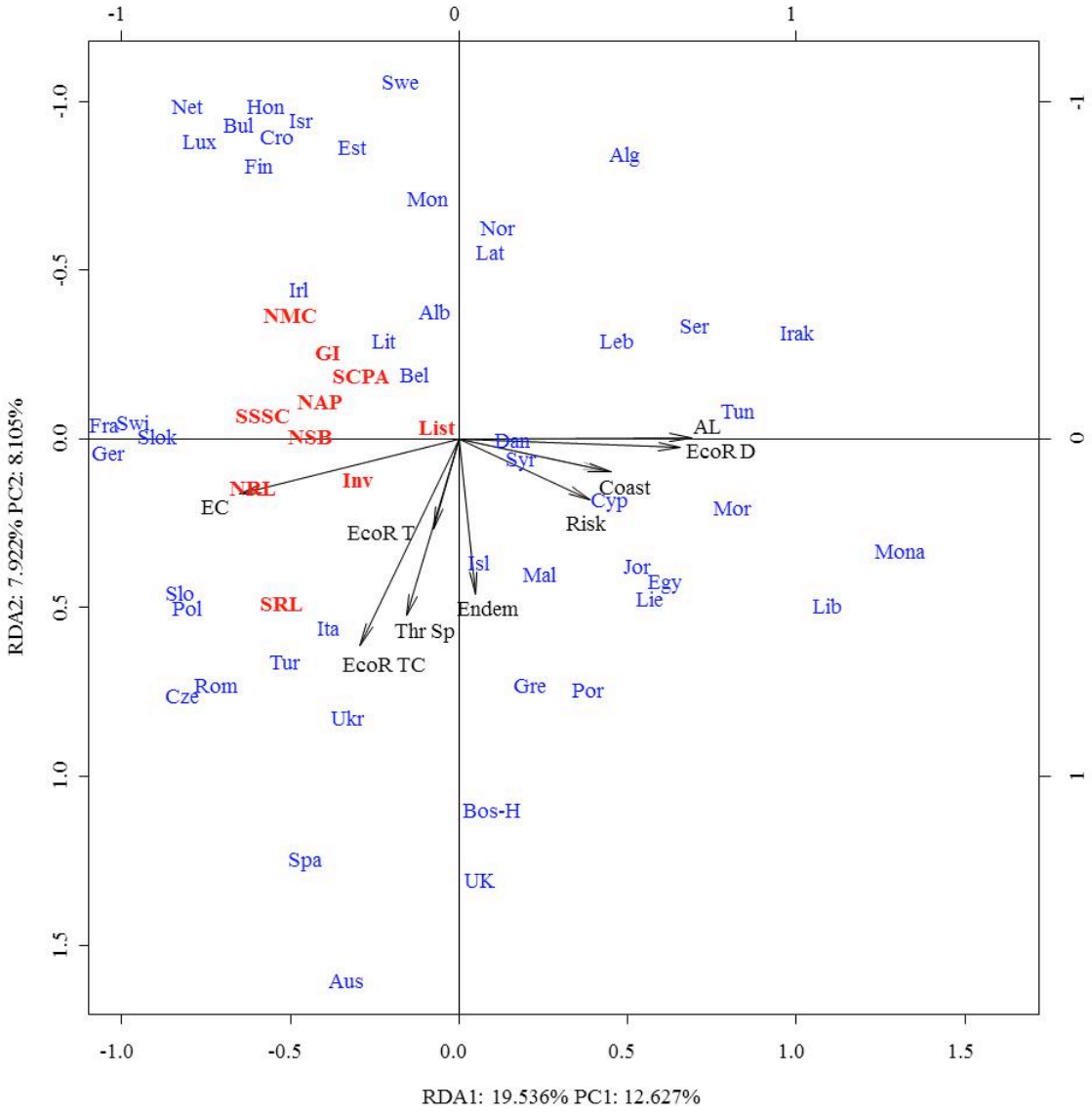


Fig. S3. Redundancy analysis (RDA) grouping countries according to their conservation strategies and descriptive variables. Countries are presented in blue; policies and programs in red; significant descriptive variables in black. Descriptive variables are considered significant when the p-value is < 0.1. The horizontal axis opposes ecoregions (temperate/desert), country risk assessment (Low/High) and regional union (Council of Europe/Arab League). The vertical axis shows the presence (on the positive side) and absence (on the negative side) of endemic and threatened species.

Abbreviated names of the 49 countries included in the RDA (Data not available for Belarus, Kosovo, Macedonia and Moldova): Alb: Albania, Alg : Algeria, Aus: Austria, Bel: Belarus, Bos-H: Bosnia and Herzegovina, Bul: Bulgaria, Cro: Croatia, Cyp: Cyprus, Cze: Czech Republic, Dan: Denmark, Egy: Egypt, Est: Estonia, Fin: Finland, Fra: France, Ger: Germany, Gre: Greece, Hun: Hungary, Ice: Iceland, Ire: Ireland, Isr: Israël, Ita: Italy, Jor: Jordan, Lat : Latvia, Leb: Lebanon, Lib: Libya, Lie : Principality of Liechtenstein, Lit: Lithuania, Lux: Luxembourg, Mal: Malta, Mol: Moldova, Mon: Montenegro, Mona: Monaco, Mor: Morocco, Net: Netherlands, Nor: Norway, Pol: Poland, Por: Portugal, Rom: Romania, Ser: Serbia, Slok: Slovakia, Slo: Slovenia, Spa: Spain, Swi: Switzerland, Swe: Sweden, Syr: Syria, Tun: Tunisia, Tur: Turkey, Ukr: Ukraine, UK: United Kingdom.

Abbreviated names of national programs and policies: GI: green infrastructures program, Inv: inventory of areas of biodiversity interest, List: protected species list, NAP: national action plan,

NMC: national monitoring center, NRL: national Red List, NSB: national strategy for biodiversity, SCPA: strategy for the creation of protected areas, SSSC: subnational strategy for species conservation, SRL: subnational Red List.

Abbreviated names of descriptive variables: AL: Arab League member, Coast: Coastline area ratio, EC: European Council member, EcoR D: Ecoregion Deserts, Xeric Schrublands, EcoR T: Ecoregion Temperate Grasslands, Savannas, Schrublands, EcoR TC: Ecoregion Temperate Conifer Forest, Endem: Endemic species, Pop: population density (hab/km2), Risk: Country risk assessment, Size reg: Average size of regions, Thr Sp: Threatened species, %AP: percentage of marine and terrestrial protected area.

Methods: 42 descriptive variables (geographic, cultural and socio-economic parameters) were considered to characterize countries and to test their influence on the development of conservation policies and programs. A principal component analysis (PCA) was used to define the most significant variables: countries land areas in km2 (The World bank 2013), number of neighboring countries (DIVA-GIS 2014), ecoregion (Olson et al. 2001), access to the sea (DIVA-GIS 2014), density of population (The World bank 2012; INSEE 2013), culture (Wikipedia 2014), regional union (Council of Europe 2014; Europa 2014; League of Arab States 2014), country risk assessment (Coface 2014), PPP-GPD (The World bank 2013), percentage of protected areas (The World bank 2013), number of threatened species (IUCN 2014a), number of endemic species groups including mammals, birds, amphibians, Sturgeons, crabs, reef-forming corals, conifers, cycada, cacti (IUCN 2014b), presence of a Red list of Ecosystem project (IUCN 2014c; Savio & Godillat 2015) and average size of administrative units (GADM 2014). Then, we conducted a redundancy analysis (RDA) to observe the relationship between biodiversity conservation strategies and the descriptive variables for each country. A permutation test allowed us to analyze the significance of each variable and select only the most significant ones (p-value <0.1, see list above).

Supplement 4. Overview table of RLs use in conservation programs and policies in 52 countries of the Euro-Mediterranean region (Summary of 133 answers to a survey)

	Red Lists of Threatened Species				Use of Red Lists in national programs/policies								Other conservation initiatives	
	NRLTS	SRLTS	NRLTS Methodology	RLI	NSB	NAP	List	SCPA	GI	Inv	EIA	NMC	SSSC	Prioritization methodology
Albania	Yes	No	IUCN 2001	No	Yes	Yes	Yes	Yes	X	Yes	Mandatory use	Yes	No	No
Algeria	No	No	X	X	Yes	No	No	No	X	X	Voluntary use	Yes	No	No
Austria	Yes	Yes	Adapted IUCN	No	Yes	Yes	Yes	X	X	Yes	Mandatory use	X	Yes	Yes
Belarus	Yes	No	Adapted IUCN	No	Yes	Yes	Yes	Yes	X	Yes	Mandatory use	Yes	No	Yes
Belgium	No	Yes	X	X	Yes	Yes	Yes	Yes	No	Yes	Mandatory use	Yes	Yes	No
Bosnia and Herzegovina	Yes	Yes	Adapted IUCN	No	No	X	No	?	?	X	No	X	No	No
Bulgaria	Yes	No	IUCN 2001	No	Yes	Yes	Yes	Yes	Yes	Yes	Mandatory use	Yes	No	Yes
Croatia	Yes	No	IUCN 2001	No	Yes	Yes	Yes	Yes	Yes	Yes	Mandatory use	Yes	No	Yes
Cyprus	Yes	No	IUCN 2001	No	Yes	X	Yes	Yes	?	Yes	Voluntary use	X	No	No
Czech Republic	Yes	Yes	Adapted IUCN	No	Yes	Yes	Yes	No	Yes	Yes	Mandatory use	X	No	Yes
Denmark	Yes	No	IUCN 2001	Yes	X	Yes	No	No	X	No	Mandatory use	?	Yes	I don't know

Egypt	Yes	No	Adapted IUCN	No	Yes	X	No	No	X	Yes	Mandatory use	X	No	No
Estonia	Yes	No	IUCN 2001	No	Yes	Yes	Yes	Yes	Yes	Yes	Voluntary use	Yes	No	No
Finland	Yes	No	IUCN 2001	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Mandatory use	Yes	No	Yes
France	Yes	Yes	IUCN 2001	No	Yes	Yes	Yes	Yes	Yes	Yes	Voluntary use	Yes	Yes	Yes
Germany	Yes	Yes	National criteria	Yes	Yes	No	No	Yes	No	No	Voluntary use	Yes	Yes	Yes
Greece	Yes	No	IUCN 2001	Yes	Yes	Yes	Yes	X	X	Yes	Voluntary use	X	No	I don't know
Hungary	Yes	No	Adapted IUCN	?	No	No	Yes	No	No	Yes	No	Yes	No	Yes
Iceland	Yes	No	IUCN 2001	No	Yes	Yes	Yes	Yes	X	Yes	Voluntary use	X	No	I don't know
Iraq	No	No	X	X	X	X	I don't know	I don't know	No	I don't know	Voluntary use	X	Yes	No
Ireland	Yes	No	IUCN 2001	No	Yes	No	Yes	No	X	No	Voluntary use	Yes	Yes	Yes
Israel	Yes	No	Adapted IUCN	No	Yes	Yes	Yes	Yes	No	Yes	Mandatory use	Yes	No	Yes
Italy	Yes	Yes	IUCN 2001	No	Yes	Yes	No	No	X	No	Mandatory use	Yes	Yes	No
Jordan	Yes	No	IUCN 2001	No	X	No	No	No	X	No	Voluntary use	X	No	No
Kosovo	No	No	X	X	Yes	Yes	Yes	Yes	Yes	Yes	Voluntary use	X	No	Yes

Latvia	Yes	No	IUCN 1994	Yes	Yes	Yes	Yes	Yes	X	X	Mandatory use	Yes	No	No
Lebanon	No	No	X	X	No	No	Yes	X	X	No	Voluntary use	Yes	No	No
Libya	No	No	X	X	X	No	No	X	X	Yes	Voluntary use	X	No	No
Liechtenstein	Yes	No	IUCN 2001	No	Yes	X	Yes	Yes	X	No	Mandatory use	X	No	No
Lithuania	Yes	No	IUCN 1994	No	Yes	Yes	Yes	Yes	?	Yes	Mandatory use	?	No	I don't know
Luxembourg	Yes	No	Adapted IUCN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Voluntary use	Yes	No	Yes
Malta	Yes	No	IUCN 1994	I don't know	Yes	?	Yes	Yes	X	Yes	Voluntary use	X	No	I don't know
Moldova	Yes	No	Adapted IUCN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	I don't know	?	No	I don't know
Monaco	No	No	X	X	X	X	No	X	X	X	No	X	No	No
Montenegro	No	No	X	X	No	Yes	No	No	X	Yes	Voluntary use	Yes	Yes	Yes
Morocco	No	No	X	X	No	X	X	Yes	X	Yes	No	X	Yes	I don't know
Netherlands	Yes	No	Adapted IUCN	No	Yes	Yes	Yes	Yes	Yes	No	Voluntary use	Yes	Yes	Yes
Norway	Yes	No	IUCN 2001	No	Yes	Yes	Yes	Yes	X	X	Mandatory use	Yes	Yes	No
Poland	Yes	Yes	Adapted IUCN	No	Yes	Yes	Yes	Yes	X	Yes	Voluntary use	Yes	Yes	Yes
Portugal	Yes	No	IUCN 2001	No	Yes	Yes	No	X	X	Yes	Mandatory	X	Yes	No

										use			
Romania	Yes	Yes	Adapted IUCN	No	Yes	Yes	Yes	Yes	Yes	Yes	Mandatory use	X	Yes	Yes
Serbia	No	No	X	X	No	X	No	No	No	No	No	X	No	No
Slovakia	Yes	Yes	IUCN 2001	No	Yes	Yes	Yes	Yes	No	Yes	Mandatory use	Yes	Yes	Yes
Slovenia	Yes	Yes	IUCN 2001	No	Yes	Yes	Yes	Yes	X	Yes	Voluntary use	Yes	No	Yes
Spain	Yes	Yes	IUCN 2001	No	Yes	Yes	Yes	No	X	Yes	Voluntary use	X	Yes	Yes
Sweden	Yes	No	IUCN 2001	Yes	Yes	Yes	Yes	Yes	Yes	X	Mandatory use	Yes	Yes	No
Switzerland	Yes	Yes	Adapted IUCN	Yes	Yes	Yes	Yes	Yes	Yes	No	Mandatory use	Yes	Yes	Yes
Syrian Arab Republic	No	No	X	X	No	No	No	No	X	No	No	X	No	Yes
Tunisia	No	No	X	X	No	Yes	No	No	X	X	Voluntary use	X	No	No
Turkey	Yes	Yes	Adapted IUCN	No	No	No	No	X	X	X	Voluntary use	Yes	Yes	Yes
Ukraine	Yes	Yes	Adapted IUCN	No	No	Yes	Yes	Yes	Yes	Yes	Mandatory use	X	Yes	No
United Kingdom	Yes	Yes	National criteria	No	Yes	Yes	Yes	Yes	X	I don't know	I don't know	X	Yes	No

Legend
Use of Red Lists in conservation programs/policies:
X: no program in the country
? : The respondent doesn't know if there is a program in the country
Yes: use of RLTSs in the program
No: No use of RLTSs in the program
IDK: A program exists but the respondent doesn't know if RLTSs are used in the program

Abbreviations: NRLTS: National Red List of Threatened Species, SRLTS: Subnational Red List of Threatened Species, Methodology NRLTS: Methodology adopted for the elaboration of the National Red List of Threatened Species, RLI: Red List Index, GI: green infrastructures program, Inv: inventory of areas of biodiversity interest, List: protected species list, NAP: national action plan, NMC: national monitoring center, NRL: national Red List, NSB: national strategy for biodiversity, SCPA: strategy for the creation of protected areas, SSSC: subnational strategy for species conservation, SRL: subnational Red List.

Abbreviated names of methodology: IUCN 2001: IUCN 2001 categories and criteria, IUCN 1994: IUCN 1994 categories and criteria, Adapted IUCN: Methodology adapted from IUCN categories and criteria, National criteria: National categories and criteria

NB. This information comes from a survey of 133 respondents from 52 countries in the Euro-Mediterranean region. The information for the Republic of Macedonia was too incomplete to be taken into consideration in this table. The use of Red Lists includes the Global, Regional, National or Subnational Red Lists of Threatened Species. We do not take responsibility for any misinformation that could be communicated here.

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