

Report

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Analysis of the compliance of the Emerald Network of Ukraine with the Natura 2000 network in terms of establishment and management practices

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Introduction

In 1996, Ukraine acceded to the Convention on the Conservation of European Wildlife and Natural Habitats¹ (hereinafter – the Bern Convention²).

The objectives of this Convention are to conserve wild flora and fauna and their natural habitats, with particular emphasis on those species and natural habitats (biotopes) whose conservation requires the cooperation of several states, as well as to promote such cooperation. In the same year, the Standing Committee of the Bern Convention adopted Resolution No. 4 (1996) “On the listing of endangered natural habitat types requiring specific conservation measures³», which defines, in its Annex I, endangered natural habitat types.

The Standing Committee of the Bern Convention also adopted Resolution No. 6 (1998) “On the listing of species requiring specific habitat conservation measures”⁴, the Annex I of which contains a list of species requiring special measures for the conservation of their habitats.

In 1989, the Standing Committee of the Bern Convention adopted Recommendation No. 16⁵, which initiated the establishment of the Emerald Network—an ecological network composed of Areas of Special Conservation Interest (ASCIs), designated for the long-term conservation of species and natural habitat types listed in Annex I to the above-mentioned Resolutions No. 4 (1996) and No. 6 (1998).

The establishment of the Emerald Network at the national level is one of the key instruments enabling Contracting Parties to fulfil their obligations under the Bern Convention.

At the same time, the European Union adopted Directive 2009/147/EC on the conservation of wild birds (hereinafter – the Birds Directive) and the Habitats Directive on the conservation of natural habitats and of wild fauna and flora (hereinafter – the Habitats Directive).

The Habitats Directive establishes an obligation to designate Special Areas of Conservation (SACs) for all natural habitat types listed in Annex I and for species listed in Annex II. The Birds Directive requires the protection and conservation of habitats for all wild bird species and mandates the designation of Special Protection Areas (SPAs) for species listed in Annex I, as well as for other regularly occurring migratory bird species not included in Annex I.

EU Member States implement the provisions of the Convention on the Conservation of European Wildlife and Natural Habitats and its decisions through the establishment of the Natura 2000 network, which is analogous to the Emerald Network, although there are certain differences in terms of designation procedures, management approaches, and the lists of protected species and habitat types.

In the context of its accession to the European Union, Ukraine is required to establish its part of the Natura 2000 network, which is expected to be based on the Emerald Network. This analysis

¹ <https://zakon.rada.gov.ua/laws/show/436/96-%D0%B2%D1%80#Text>

² <https://eur-lex.europa.eu/eli/convention/1982/72/oj/eng>

³ <https://search.coe.int/democracy?i=09000016807469e7>

⁴ <https://search.coe.int/democracy?i=0900001680746afc>

⁵ <https://search.coe.int/democracy?i=0900001680746c25>



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Development of proposals on transformation of the Emerald network to Natura 2000 network

is therefore focused on assessing the alignment of the Ukrainian Emerald Network with Natura 2000.

This report analyses the current state of the Emerald Network development in Ukraine, as well as its similarities and differences compared to Natura 2000. It also aims to assess existing approaches to the management of areas important for the conservation of habitats and species in the context of European standards and Ukraine’s international obligations. The report includes an overview of key management principles under the Habitats and Birds Directives, as well as the Bern Convention, followed by an assessment of their practical implementation in Ukraine based on an analysis of selected management documents and enforcement practices.

Development of the Emerald Network and Natura 2000 in Ukraine

The Emerald Network is established in countries that are Parties to the Convention on the Conservation of European Wildlife and Natural Habitats. Its primary objective is the long-term conservation of species of flora and fauna, as well as natural habitat types (biotopes) requiring special protection.

As of today, the Ukrainian list of Emerald Network sites comprises 538 sites with a total area of 12,211.4 thousand hectares. Terrestrial areas account for approximately 15.8% of the country's land area. Of these:

- 377 sites, covering 7,922.6 thousand hectares, were approved under the Bern Convention in 2016 and 2019, including 1,030.61 thousand hectares of marine areas;
- 161 sites, covering 4,289.14 thousand hectares, were proposed by Ukraine in 2021, based on submissions prepared by scientists from the NGO “Ukrainian Nature Conservation Group” and the Ukrainian Society for the Protection of Birds, with the involvement of academic experts. These proposals include 1,638.37 hectares of marine areas.

According to data from the Bern Convention, the Emerald Network in Ukraine is sufficient for only 44.9% of species and natural habitat types protected at the European level.

The Natura 2000 network is established in EU Member States in accordance with the Habitats Directive and the Birds Directive. Its objective is to ensure the maintenance or, where necessary, the restoration of a favourable conservation status of relevant natural habitat types and species' habitats within their natural range.

As Ukraine is progressing towards accession to the European Union, a national Natura 2000 network is not yet in place. The development of the Natura 2000 network and the establishment of its management mechanisms are among the key tasks to be addressed in the course of EU accession.

Components of the Emerald Network and the Natura 2000 Network

The Emerald Network consists of Areas of Special Conservation Interest (ASCIs), designated for the long-term conservation of species and natural habitat types listed in the Annexes to Resolution No. 4 (1996) “On the listing of endangered natural habitat types requiring specific conservation measures”⁶ and Resolution No. 6 (1998) “On the listing of species requiring specific conservation measures”, adopted under the Convention on the Conservation of European Wildlife and Natural Habitats⁷.

⁶ <https://search.coe.int/democracy?i=09000016807469e7>

⁷ <https://search.coe.int/democracy?i=0900001680746afc>

The Habitats Directive establishes an obligation to designate Special Areas of Conservation (SACs) for all natural habitat types listed in Annex I and for species listed in Annex II that occur within the territory of a given country.

The Birds Directive requires the protection and conservation of habitats for all wild bird species and mandates the designation of Special Protection Areas (SPAs) for species listed in Annex I, as well as for other regularly occurring migratory bird species not included in Annex I and present within the territory of the country.

In practice, there are sites that are important both for the conservation of birds and for the conservation of other fauna, flora, or natural habitat types. Accordingly, Natura 2000 sites fall into three categories:

- sites designated under the Birds Directive (SPAs);
- sites designated under the Habitats Directive (SACs);
- sites designated under both Directives (with fully overlapping boundaries).

Differences in the structural components of the Emerald Network and Natura 2000 are relevant when preparing site lists and completing Standard Data Forms (SDFs). While both networks are intended to cover areas important for ensuring a favourable conservation status of species of flora and fauna and natural habitat types, their designation processes differ, particularly in the requirement, under Natura 2000, to maintain separate datasets for birds and for other species and habitat types.

Criteria for the designation of the Emerald Network and the Natura 2000 Network

The identification of Emerald Network and Natura 2000 sites is based exclusively on clearly defined scientific criteria, including the representativity of habitats, their conservation status, and restoration potential.

The criteria for selecting Emerald Network sites are defined in Recommendation No. 16 (1989) of the Convention on the Conservation of European Wildlife and Natural Habitats on Areas of Special Conservation Interest (ASCIs).

The criteria for the selection of sites for natural habitat types and for species of flora and fauna (excluding birds) are set out in Annex III to the Habitats Directive.

Criteria for the identification of sites for birds are defined in Article 4 of the Birds Directive and in the Guidelines for the Application of the IBA Criteria (final version, July 2020)⁸. Important Bird Areas (IBAs) are sites of key importance for the conservation of birds and biodiversity, and their identification forms part of a global initiative coordinated by BirdLife International. The IBA programme was developed to establish consistent and standardised criteria for the designation of Special Protection Areas (SPAs). IBA sites are also used to assess the adequacy of national SPA networks designated by EU Member States⁹.

⁸ <https://datazone.birdlife.org/about-our-science/ibas>

⁹ https://data.europa.eu/data/datasets/m_amte-299fn3-a31da965-7b90-4cbe-eac2-32a687bb2509?locale=en

The specific criteria for site selection under the Emerald Network and Natura 2000 differ in their level of detail, which affects the degree of alignment between the two systems. A comparison of the site selection criteria defined under the Bern Convention, the Habitats Directive, and the Birds Directive is provided below (Table 1).

Table 1. Comparison of the criteria of the Bern Convention with those of the Habitats and Birds Directives

Bern Convention, Recommendation No. 16 (1989) on Areas of Special Conservation Interest (ASCIs)	Habitats Directive, Annex III criteria (SACs/SCIs)	Birds Directive, site selection (SPAs) (Article 4 and IBA Guidelines)	Comparison
(a) the site contributes substantially to the survival of endangered, endemic species or any species listed in Appendices I and II of the Convention	Stage 1: B(a) size and density of the population of the species present on the site in relation to populations within the national territory; B(d) overall assessment of the value of the site for the conservation of the species concerned	Article 4(1) and (2): Member States classify the most suitable territories in number and size for the conservation of Annex I species and regularly occurring migratory species. Site selection is based exclusively on ornithological criteria	In all cases, priority is given to threatened and listed species. The Directives apply mandatory, measurable and structured criteria, while Recommendation No. 16 is more general
(b) the site supports a significant number of species in an area of high species diversity or supports important populations of one or more species	Stage 1, B(a); Stage 2 takes into account the relative value of the site at national level and its overall ecological value	SPA Guidelines, Stage 1: 1) $\geq 1\%$ of the national population of an Annex I species; 2) $\geq 1\%$ of the biogeographical population of a regularly occurring migratory species; 3) >20,000 waterbirds or seabirds; 4) sites meeting Stage 2 criteria	Conceptually, the criteria correspond; however, SPAs and the Habitats Directive apply more quantitative approaches (thresholds, density, significance assessment). Recommendation No. 16 is formulated in qualitative terms
(c) the site contains an important and/or representative sample of endangered habitat types	Stage 1: A(a) degree of representativity of the habitat type on the site; A(b) area of the site covered by the habitat type in relation to the	SPAs do not include direct criteria for habitat types, but habitat quality is important as a condition for bird conservation	Criteria under Recommendation No. 16 and Annex III A(a–b) are broadly aligned. However, the Directive provides more detailed requirements for



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Bern Convention, Recommendation No. 16 (1989) on Areas of Special Conservation Interest (ASCIs)	Habitats Directive, Annex III criteria (SACs/SCIs)	Birds Directive, site selection (SPAs) (Article 4 and IBA Guidelines)	Comparison
	total area of that habitat type within the country		representativity and area
(d) the site contains an outstanding example of a particular habitat type or a mosaic of different habitat types	Stage 1: A(a), A(c), A(d): representativity; degree of conservation of structure and functions; overall assessment of the site value	For SPAs, ecological habitat quality is considered through Stage 2 criteria: breeding success, history of site occupation, naturalness, species diversity, role under severe weather conditions, etc.	Recommendation No. 16 sets general requirements, whereas Annex III and SPA Stage 2 break them down into detailed sub-criteria
(e) the site is an important area for one or more migratory species	Stage 2: Geographical position of the site in relation to migration routes and ecological connectivity is taken into account	Article 4(2): measures for regularly occurring migratory species not listed in Annex I; special attention to key sites (breeding, moulting, wintering, staging areas), especially wetlands of international importance. Stage 1 includes $\geq 1\%$ thresholds	Both Recommendation No. 16 and the Directives identify key sites for migratory species as a priority. However, the Directives provide more detailed criteria and take into account network coherence
(f) the site contributes significantly to achieving the objectives of the Convention in other ways	Stage 1: A(d), B(d) "overall assessment of value". Stage 2: contribution of the site to "favourable conservation status" and "integrity of the Natura 2000 network"	Articles 3-4 of the Birds Directive: SPAs must form a "coherent network"; the European Commission assesses the adequacy of designated sites	Recommendation No. 16 contains a general overarching provision. In the Directives, this is divided into "overall value", "favourable status" and "network integrity"
Degree of isolation of the population on the site relative to the natural range is not	Stage 1: B(c) degree of isolation of the population present on the site in	Not explicitly stated for SPAs, but Stage 2 criteria consider species range, geographical	Recommendation No. 16 does not require a specific assessment of isolation, whereas the



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Bern Convention, Recommendation No. 16 (1989) on Areas of Special Conservation Interest (ASCIs)	Habitats Directive, Annex III criteria (SACs/SCIs)	Birds Directive, site selection (SPAs) (Article 4 and IBA Guidelines)	Comparison
explicitly mentioned, but may be indirectly reflected in (a), (b) or (f)	relation to the natural range of the species	coverage and network coherence	Habitats Directive does, and the Birds Directive includes a more general requirement
Assessment of conservation status and restoration potential is not explicitly formulated, although implicitly present in (c), (d) and (f)	Stage 1: A(c) and B(b): assessment of conservation status and restoration potential – mandatory criteria	In SPAs, this is addressed through habitat quality indicators such as breeding success, naturalness, and resilience to adverse conditions	The Directives contain explicit formulations. Recommendation No. 16 relies on general concepts
No quantitative ornithological criteria are provided; criteria are entirely qualitative	Annex III does not include fixed numerical thresholds, but assessments are made relative to populations and areas	SPAs: Stage 1 and Stage 2 include quantitative ornithological criteria ($\geq 1\%$, $>20,000$ birds, key sites under severe conditions)	SPAs use quantitative criteria that are not present in Recommendation No. 16; the Birds Directive combines quantitative and relative approaches
Species range (biogeographical assessment) is not explicitly stated, but may be indirectly reflected in (b), (d) and (f)	Stage 2: geographical position of the site within biogeographical regions is taken into account	SPAs Stage 2: criteria include species range, broad geographical coverage and reliance on IBA to ensure completeness	Explicit biogeographical assessment is required only under the Directives

Biogeographical Regions

The assessment of the sufficiency of the Emerald Network and the Natura 2000 network for each country, the evaluation of the conservation status of species (excluding birds), as well as the overall planning and implementation of conservation measures are carried out within the framework of biogeographical regions.

Biogeographical regions represent clearly defined large areas across Europe, primarily determined by climate, orography, and dominant vegetation. Conservation measures targeting natural habitat types and species should be consistent across all countries within a given biogeographical region. EU Member States are expected to implement conservation measures in

accordance with the natural characteristics of the respective biogeographical region, rather than based on differing national policies driven by political considerations.

The European Commission and the Secretariat of the Convention on the Conservation of European Wildlife and Natural Habitats have agreed that the classification of terrestrial biogeographical regions and their boundaries should be identical for both the Natura 2000 network and the Emerald Network (Fig. 1).

Within Ukraine, four terrestrial biogeographical regions are recognised: Alpine, Continental, Pannonian, and Steppic:

ALP (Alpine) – the Alpine region, covering high-mountain areas of Europe (the Alps and the Carpathians), characterised by mountain ecosystems, low temperatures, and specific flora and fauna;

CON (Continental) – the Continental region, covering lowland areas of Europe with a temperate climate, mixed and broadleaved forests, and grasslands;

PAN (Pannonian) – the Pannonian region, covering the lowlands of Central Europe (the Pannonian Plain), characterised by a relatively dry climate and steppe and forest-steppe ecosystems;

STE (Steppic) – the Steppic region, encompassing arid lowland areas of Eastern and South-Eastern Europe, with grassland vegetation typical of steppes.

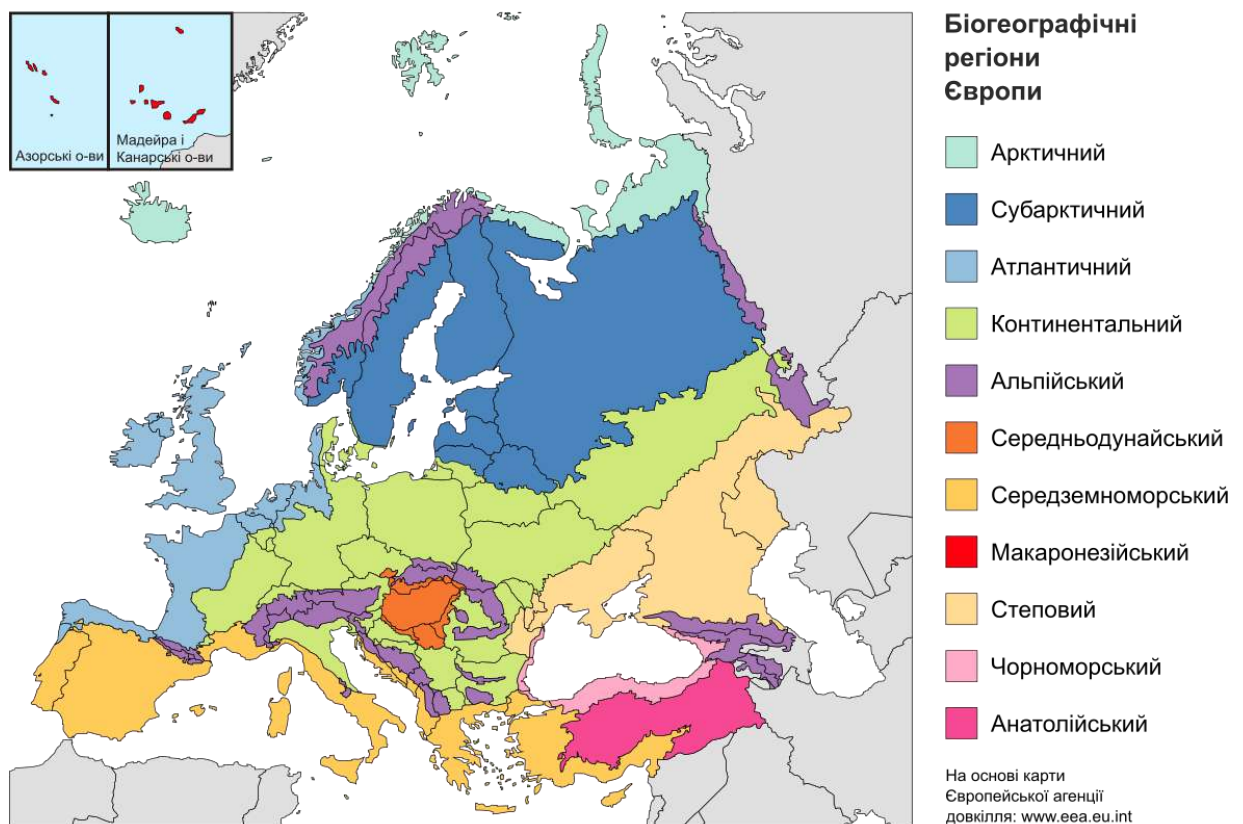


Fig. 1. Map of biogeographical regions of Europe and parts of Asia (as of 2016)

A map of marine regions and subregions is also used. This map reflects the spatial boundaries of regions and subregions defined under the EU Marine Strategy Framework Directive (MSFD). The delimitation of marine regions and subregions under the MSFD was developed between 2010 and 2016 within the framework of the Common Implementation Strategy for the MSFD. The map was approved by EU Member States in the MSFD Committee in November 2016 and is periodically updated.

The following MSFD regions and subregions are included:

Adriatic Sea

Aegean-Levantine Sea

Baltic Sea

Bay of Biscay and Iberian Coast

Black Sea

Celtic Seas

Greater North Sea, including the Kattegat and the English Channel

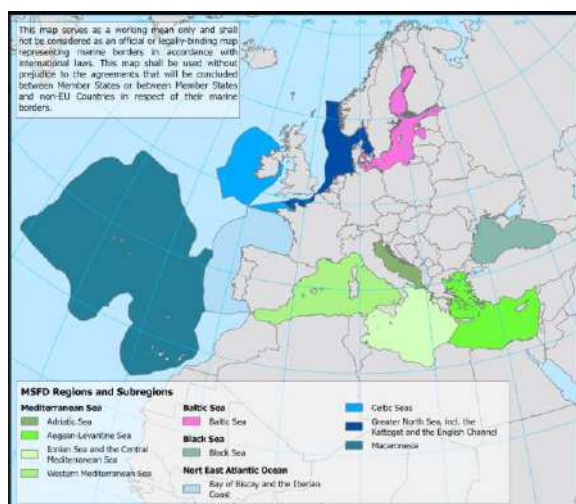
Ionian Sea and the Central Mediterranean Sea

Macaronesia

Western Mediterranean Sea

The map does not include aggregated MSFD region polygons for the Black Sea, the North-East Atlantic, or the Mediterranean Sea. The spatial coverage of the map corresponds to the EU-27 (following Brexit, the marine waters of the United Kingdom are excluded)¹⁰.

Fig. 2. Map of marine regions and subregions



¹⁰ <https://www.eea.europa.eu/en/analysis/maps-and-charts/biogeographical-and-marine-regions-in>

Evaluation of the sufficiency of the Emerald Network in Ukraine

The most recent biogeographical seminars assessing the sufficiency of the Emerald Network in Ukraine were held in 2018–2019.

As a result of these seminars, detailed final conclusions (assessments) were produced regarding the adequacy of representation of natural habitat types listed in Resolution No. 4 (1996) and species listed in Resolution No. 6 (1998) of the Convention on the Conservation of European Wildlife and Natural Habitats within the proposed Emerald Network sites in Ukraine. These assessments reflect the sufficiency of the Emerald Network within Ukraine’s biogeographical regions in ensuring the conservation of species of flora and fauna and natural habitat types present in the country.

The assessments presented in the tables below reflect the results of the analysis of the sufficiency of representation of species and natural habitat types within the Emerald Network of Ukraine, based on the outcomes of the Bern Convention biogeographical seminars—namely, the Biogeographical Evaluation Seminar of the Emerald Network for species (excluding birds) and natural habitats for Belarus, the Republic of Moldova, and Ukraine (18–19 June 2019, Minsk, Belarus), and the Biogeographical Evaluation Seminar of the Emerald Network for bird species for Belarus, the Republic of Moldova, and Ukraine (23–24 May 2018, Kyiv, Ukraine).

All conclusions of the biogeographical evaluation seminars, including consolidated sufficiency assessments, reference lists, and materials from individual seminars, are available on the official Bern Convention website at: <https://www.coe.int/en/web/bern-convention/conclusions-of-the-biogeographical-seminars>. The assessment was carried out using a standardised system of abbreviations used to characterise the level of network coverage, identify the need for further development of the network, and determine the necessity for additional research or data refinement. The explanations of the abbreviations used are provided below.

EXCL (Excluded) – the species or habitat is excluded from consideration because it does not meet the criteria for inclusion in the network;

IN MIN (Insufficient, Minor) – minor lack of coverage in the network (minimal adjustments are required);

IN MAJ (Insufficient, Major) – significant lack of coverage in the network (significant changes or expansion of territories are required);

IN MOD (Insufficient, Moderate) – moderate lack of coverage (the network covers a significant part, but this is not enough for long-term preservation);

SR (Scientific Reserve) – data requires clarification (additional research is required);

SUF (Sufficient) – sufficient coverage that ensures the long-term conservation of a species or habitat;

EXCL REF (Excluded from Reference List) – the species is excluded from the list of objects for protection (for example, due to lack of confirmation of its presence in the region);

EXCL REF/CD – excluded from the list of references with data clarification (Correction of Data, it is necessary to review existing records before final exclusion);

IN MIN/CD – minor coverage deficiency with the need for data clarification;

IN MIN/SR/CD – minor deficiency, additional studies and data clarification;

IN MOD/CD – moderate under-coverage with the need to correct the available data;

IN MOD/IN MIN – combined assessment: different parts of the territory have minor and moderate coverage deficiencies;

IN MOD/IN MIN/CD – combined estimate with data refinement;

IN MOD/SR – moderate deficiency requiring additional scientific research;

IN MOD/SR/CD – moderate deficiency, need for scientific research and data correction;

SR REF – requires scientific clarification to confirm the presence of the species on the lists;

SR/CD – need for additional research and data correction to confirm the status of the species;

SUF/CD – sufficient coverage, but refinements are needed (e.g. refinement of population characteristics or territories).

Out of 120 natural habitat types assessed (ALP – 1, ALP-Car – 76, CON – 74, PAN – 72, STE – 91) (Table 2), sufficient coverage to ensure long-term conservation was identified for 35 out of 76 habitat types in the ALP-Car region, 35 out of 74 in the CON region, 7 out of 72 in the PAN region, and 39 out of 91 in the STE region.

Insufficient coverage within the network (for ensuring long-term conservation) was identified for 20 out of 76 habitat types in the ALP-Car region, 31 out of 74 in the CON region, 31 out of 72 in the PAN region, and 45 out of 91 in the STE region.

Table 2. Final conclusions on the representation of natural habitat types

Conclusions (assessments)	ALP	ALP-Car	CON	PAN	STE
EXCL REF		10	5	29	3
EXCL REF/CD		5	2	2	2
IN MAJ		1	2	1	1
IN MAJ/IN MIN					1
IN MIN		4	8	3	12
IN MIN/CD		1			2
IN MOD		10	9	19	10
IN MOD/CD				3	2

Conclusions (assessments)	ALP	ALP-Car	CON	PAN	STE
IN MOD/IN MIN		4	11	5	13
IN MOD/IN MIN/CD			1		4
SR		3			2
SR REF	1	3	1	3	
SUF		33	33	6	34
SUF/CD		2	2	1	5

Out of 60 plant species assessed (ALP-Car – 20, CON – 38, PAN – 16, STE – 39) (Table 3), sufficient coverage to ensure long-term conservation was identified for 8 out of 20 species in the ALP-Car region, 17 out of 38 in the CON region, 1 out of 16 in the PAN region, and 26 out of 39 in the STE region.

Insufficient coverage within the network (for ensuring long-term conservation) was identified for 5 out of 20 species in the ALP-Car region, 12 out of 38 in the CON region, 5 out of 16 in the PAN region, and 11 out of 39 in the STE region.

Table 3. Final conclusions on the representation of plant species

Conclusions (assessments)	ALP-Car	CON	PAN	STE
EXCL REF	6	1	9	
EXCL REF/CD	1	3		1
IN MIN	3	4	1	3
IN MOD	2	8	3	6
IN MOD/CD				1
IN MOD/IN MIN			1	1
SR		4	1	1
SR REF		1		
SUF	8	14	1	25
SUF/CD		3		1

Out of 90 fauna species assessed (ALP-Car – 79, CON – 87, PAN – 69, STE – 88) (Table 4), sufficient coverage to ensure long-term conservation was identified for 41 out of 79 species in the ALP-Car

region, 36 out of 87 in the CON region, 15 out of 69 in the PAN region, and 31 out of 88 in the STE region.

Insufficient coverage within the network (for ensuring long-term conservation) was identified for 25 out of 79 species in the ALP-Car region, 36 out of 87 in the CON region, 34 out of 69 in the PAN region, and 31 out of 88 in the STE region.

Significant insufficiency of network coverage (requiring substantial changes or expansion of sites) was identified only for a limited number of invertebrate species listed in Resolution No. 6 (1998):
– 5 species in the ALP-Car region (*Vertigo angustior*, *Limoniscus violaceus*, *Isophya stysi*, *Odontopodisma rubripes*, *Pholidoptera transsylvanica*); – 2 species in the CON region (*Vertigo geyeri*, *Arytrura musculus*); – 8 species in the PAN region (*Unio crassus*, *Maculinea nausithous* / *Phengaris nausithous*, *Limoniscus violaceus*, *Graphoderus bilineatus*, *Leptidea morsei*, *Isophya stysi*, *Odontopodisma rubripes*, *Pholidoptera transsylvanica*); – 2 species in the STE region (*Arytrura musculus*, *Stenobothrus eurasius*) (Table 4).

Table 4. Final conclusions on the representation of animal species

Assessment	ALP-Car	CON	PAN	STE
EXCL REF	2	1	5	3
EXCL REF/CD	5	5	4	12
IN MAJ	5	2	8	2
IN MIN	9	4	4	11
IN MIN/CD	3	5		4
IN MIN/SR/CD		1		
IN MOD	1	12	14	8
IN MOD/CD	3	8	1	
IN MOD/IN MIN	4	2	6	4
IN MOD/IN MIN/SR				1
IN MOD/IN MIN/CD		1	1	
IN MOD/SR				1
IN MOD/SR/CD		1		
SR	6	6	5	5
SR REF		2	5	1
SR/CD		1	1	5



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Assessment	ALP-Car	CON	PAN	STE
SUF	24	19	10	18
SUF/CD	17	17	5	13

Out of 119 bird species assessed, sufficient coverage (Table 5) to ensure long-term conservation was identified for 43 species, while 57 species were found to have insufficient coverage within the network (for ensuring long-term conservation).

Table 5. Final conclusions on the representation of bird species

Assessment	Quantitative indicator
EXCL REF LIST	7
EXCL REF LIST/CD	1
IN MIN	2
IN MIN/CD	8
IN MIN/IN MOD	2
IN MIN/IN MOD/CD	4
IN MOD	8
IN MOD/CD	33
SR	7
SR REF LIST	1
SR/CD	3
SUF	5
SUF/CD	38

Classification of natural habitat types (biotopes) under the Bern Convention and the Habitats Directive

The classification of natural habitat types (biotopes) listed in Resolution No. 4 (1996) of the Convention on the Conservation of European Wildlife and Natural Habitats and in Annex I of the Habitats Directive differs. Annex I uses a specifically adapted classification system based on CORINE biotopes. In contrast, the list of habitats in Resolution No. 4 (1996) of the Bern Convention is based on the EUNIS classification (2012 version).

For example, habitat type E1.2 Perennial calcareous grasslands and basic steppes, listed in the Annex to Resolution No. 4 (1996) of the Bern Convention, represents a single unit within this system. However, this broad type is represented by a number of units at lower hierarchical levels within the classification. To better understand the scope and diversity of this habitat type, the original descriptions of each of the subordinate habitat types in the EUNIS system (version 2012) are provided below.

E1.22 Arid subcontinental steppic grassland (*Festucion valesiaca*)

Open or closed, dry, species-rich steppe-like habitats of subcontinental regions of Central Europe, typically with species of the genus *Stipa*, *Festuca valesiaca*, *Festuca rupicola*, and *Festuca trachyphylla*. The vegetation belongs to alliances such as *Festucion valesiaca* and *Bromopannonici-Festucion csikhegyensis*, with additional species including *Festuca pallens*, *Poa badensis*, *Carex humilis*, *Sesleria varia*, *Teucrium montanum*, *Ononis pusilla*, *Helianthemum canum*, *Iris aphylla*, *Onosma tornensis*, *Draba lasiocarpa*, *Scorzonera austriaca*, and *Fumana procumbens*.

E1.23 Meso-xerophile subcontinental meadow-steppes (*Cirsio-Brachypodion*)

Mesoxerophilous grassland habitats of Central Europe, characterised by *Astragalus danicus*, *Inula spiraeifolia*, *Seseli annuum*, species of the genus *Linum*, *Carex michelii*, *Carex praecox*, and *Carex flacca*. These include diverse grass-forb communities occurring mainly in lowland and upland areas. As a result of grazing, there is a tendency towards mesophytisation, often accompanied by the widespread occurrence of common juniper (*Juniperus communis*). In vegetation communities of the *Cirsio-Brachypodion pinnati* alliance, common species include *Brachypodium pinnatum*, *Festuca rupicola*, *Cirsium pannonicum*, *Linum flavum*, *Potentilla alba*, *Bromus erectus*, *Coronilla varia*, *Buphthalmum salicifolium*, and *Campanula glomerata*.

E1.28 Central European calcaro-siliceous grassland

Lowland Central European xerophilous, rupicolous or psammophilous grassland habitats on weakly calcareous substrates, characterised by *Festuca heteropachys*, *Festuca trachyphylla*, *Koeleria macrantha* (*Koeleria gracilis*), *Phleum phleoides*, *Luzula campestris*, *Dianthus deltoides*, *Jasione montana*, *Agrostis tenuis*, *Potentilla erecta*, *Armeria elongata*, *Artemisia campestris*, *Aster linosyris*, *Lychnis viscaria*, *Silene otites*, *Silene nutans*, *Chamaespartium sagittale*, *Campanula patula*, *Potentilla rupestris*, *Helianthemum nummularium* ssp. *obscurum*, *Helianthemum apenninum*, *Scleranthus perennis*, and *Allium senescens* ssp. *montanum*.

E1.29 : *Festuca pallens* grassland

Subcontinental xeric, thermophilous grassland habitats of Central European foothill rocky outcrops, dominated mainly by dense tussocks of glaucous *Festuca pallens*, *Festuca sadlerana*, and *Festuca pannonica*, as well as the green *Sesleria albicans*. Other characteristic species include *Dianthus gratianopolitanus*, *Carex humilis*, *Melica ciliata*, *Aster alpinus*, *Artemisia campestris*, *Artemisia campestris* ssp. *lednicensis*, species of the genus *Hieracium*, *Biscutella laevigata* ssp. *varia*, *Teucrium botrys*, *Teucrium montanum*, *Helianthemum canum*, *Iris aphylla*, *Allium strictum*, and *Allium senescens* ssp. *montanum*. These habitats are locally distributed from the French Jura and the Rhine Valley to the sub-Pannonian foothills and the Carpathians in Romania. Communities of the *Festucion pallescentis* alliance often occupy isolated sites and include rare or relict species that confer a distinct biogeographical and physiognomic identity. In particular, rare and highly disjunct western outposts occur in the Meuse River basin in the Belgian and French Ardennes, where, among others, very isolated populations of *Draba aizoides* var. *montana*, *Artemisia alba* ssp. *saxatilis*, and *Hieracium vogesiacum* are found.

E1.2C : Pannonic loess steppic grassland

Grassland communities of the *Festucion valesiacae* alliance in the Pannonian region, rich in *Stipa* species (*Stipa capillata*, *Stipa pulcherrima*, *Stipa joannis*) and herbaceous dicotyledonous species, including *Salvia nemorosa*, *Salvia austriaca*, *Filipendula vulgaris*, *Astragalus austriacus*, *Astragalus exscapus*, *Phlomis tuberosa*, *Crambe tatarica*, *Galium verum*, *Ajuga genevensis*, *Dianthus pontederiae*, *Thymus glabrescens*, as well as grasses such as *Festuca rupicola* and *Koeleria macrantha*. These communities have developed, in particular, on loess ridges formed through fluvial erosion and deposition. They are rare and sensitive to livestock grazing and trampling, and have been significantly transformed into other types of grassland habitats.

E1.2D : Ponto-Sarmatic steppes

Steppes of the plains of the Western Black Sea region, west of the Dniester and associated basins, including those located in the Lower Danube region, Transylvania, and Northern Thrace, as well as on the southern margins and in the valleys of the Podolian, Central Russian, and Volga Uplands. These steppes are characterised by *Stipa capillata*, *Kochia prostrata*, *Koeleria lobata* (*Koeleria degenii*), *Stipa lessingiana*, *Festuca valesiaca*, *Dichanthium ischaemum* (*Bothriochloa ischaemum*), *Medicago minima*, and *Brachypodium pinnatum*.

E1.2F : Pannonic sand steppes

Communities dominated by medium- and tall-growing perennial tussock grasses or subshrubs, forming a sparse herb layer and, together with associated therophyte communities, developing on mobile or stabilised sands within the range of Pannonian steppes (E1.2C), i.e. in the Pannonian Basin and in areas where these characteristic communities are predominantly distributed.

E1.2G : Ponto-Sarmatic sand steppes

Communities dominated by medium- or tall-growing perennial grasses or subshrubs, forming a sparse herb layer and, together with associated therophyte communities, developing on mobile or stabilised sands within the range of Pontic–Sarmatian steppes (E1.2D) and in regions where these communities are distributed.

Within the European Union, steppes have a limited distribution and are mainly represented by extrazonal steppe patches. As a result, it is currently quite difficult to identify direct equivalents for the full diversity of Ukrainian steppes within Annex I of the Habitats Directive. At present, steppe habitats in Annex I of the Directive are represented by the following types:

6190 Rupicolous pannonic grasslands (*Stipo-Festucetalia pallentis*)

This habitat type occurs on steep, dry slopes in the mid-elevation mountains of the Pannonian Basin and adjacent regions, at altitudes of 150–900 m a.s.l. The underlying bedrock is primarily limestone, dolomite, or calcareous volcanic rock (basalt, andesite, gabbro), and the soils are shallow rendzinas.

6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites)

This habitat type is formed, on the one hand, by steppe or subcontinental grassland communities (*Festucetalia valesiaca*), and on the other by grassland communities of more oceanic and sub-Mediterranean regions (*Brometalia erecti*). In the latter case, a distinction is made between primary grassland communities of the *Xerobromion* alliance and secondary (semi-natural) grassland communities of the *Mesobromion* alliance with *Bromus erectus*, which are characterised by a rich orchid flora.

As a result of abandonment, thermophilous shrub communities develop, with an intermediate stage of thermophilous fringe vegetation (*Trifolio-Geranietea*). Orchid habitats should be considered important if they meet at least one of the following three criteria:

- (a) the site supports a high diversity of orchid species;
- (b) the site hosts an important population of at least one orchid species that is not very common within the country;
- (c) the site supports one or more orchid species considered rare, very rare, or exceptional within the country.

6240 Sub-Pannonic steppic grasslands

This habitat type comprises steppe communities dominated by tussock grasses, chamaephytes, and perennial species of the *Festucion valesiaca* alliance and related syntaxa. These xerothermic communities develop on south-facing slopes with AC-type soils on rocky substrates, as well as on clay–sandy sedimentary layers enriched with gravel. They are of partly natural and partly anthropogenic origin.

6250 Pannonic loess steppic grasslands

This habitat type comprises grassland communities rich in perennial grasses and forbs on loess deposits. In the past, they covered extensive areas, but today they are confined to specific landforms, such as loess ridges formed as a result of fluvial erosion and deposition.

6260 Pannonic sand steppes

This habitat type is represented by communities dominated by medium- or tall-growing perennial tussock-forming grasses or subshrubs, with a sparse herb layer, together with associated therophyte communities developing on mobile or stabilised sands (alluvial sands, subfossil dune

systems) within the Pannonian steppes (34.91), i.e. in the Pannonian Basin and in areas where characteristic communities of this region predominate. It also includes similar communities in the Western Pontic Basin (34.A2).

62C0 Ponto-Sarmatic steppes

This type encompasses steppes of plains, plateaus, and uplands of the Western Black Sea region, west of the Dniester and associated river basins, including the Lower Danube, Transylvania, and Northern Thrace, as well as the southern margins and valleys of the Podolian, Central Russian, and Volga Uplands, the Orenburg region, and Bashkiria. It is characterised by the presence of *Stipa capillata*, *Stipa lessingiana*, *Kochia prostrata*, *Koeleria lobata* (*Koeleria degenii*), *Festuca valesiaca*, and *Dichanthium ischaemum* (syn. *Bothriochloa ischaemum*), and includes vegetation of the *Festucion valesiaca*, *Stipion lessingiana*, *Agropyro-Kochion*, and *Pimpinello-Thymion zygoidi* alliances.

Accordingly, a dedicated component of this study focused on comparing the classification of natural habitat types between the system of Resolution No. 4 (1996) of the Convention on the Conservation of European Wildlife and Natural Habitats and Annex I of the Habitats Directive. The analysis of correspondences between habitat types listed in Resolution No. 4 (1996) of the Bern Convention and those in Annex I of the Habitats Directive revealed several types of relationships.

In some cases, several habitat types of the Habitats Directive correspond to several habitat types of Resolution No. 4 (1996), reflecting complex ecological and syntaxonomical relationships and complicating unambiguous interpretation when completing Standard Data Forms. In other cases, a single habitat type from Annex I of the Habitats Directive corresponds to several habitat types of Resolution No. 4 (1996), indicating differences in the level of classification detail and a potential risk of losing ecological specificity when aggregating types in the transition to the Natura 2000 network.

Situations were also identified where several habitat types of the Habitats Directive correspond to a single type of Resolution No. 4 (1996), which may lead to an underestimation of structural diversity within the Emerald Network. The most methodologically robust cases are those with direct one-to-one correspondence; however, these are relatively limited. In addition, habitat types were identified for which no direct correspondence exists between the systems, due to differences in classification logic, national habitat specificity, or subsequent developments in classification approaches.

Thus, the Emerald Network in Ukraine covers a substantial proportion of natural habitat types; however, the sufficiency of their representation for ensuring a favourable conservation status is uneven and requires further improvement. Key challenges include incomplete spatial coverage in certain biogeographical regions; a significant number of assessments indicating moderate or minor insufficiency; the need for refinement of scientific data; and the absence of a fully harmonised correspondence matrix between the classifications of Resolution No. 4 (1996) and the Habitats Directive.

For further integration of the Ukrainian part of the Emerald Network into the future Natura 2000 network, it is necessary to update the national list of habitats, harmonise approaches to their

identification and mapping, and strengthen the biogeographical assessment of network sufficiency in line with the criteria set out in Annex III of the Habitats Directive.

Detailed information on the types of natural habitats listed in Annex I of the Habitats Directive that are present in Ukraine is provided in Annex 1 to this report.

Comparison of fauna and flora species (excluding birds) for which the Emerald Network and Natura 2000 are established

The Emerald Network is established for species of flora and fauna listed in Annex I to Resolution No. 6 (1998) of the Convention on the Conservation of European Wildlife and Natural Habitats. The Habitats Directive sets the rules for the designation of Special Areas of Conservation (SACs) in order to ensure a favourable conservation status of species listed in its Annex II.

Most species listed in Annex II of the Habitats Directive and occurring in Ukraine are also included in Resolution No. 6 (1998) of the Bern Convention. At the same time, there are several species for which the establishment of the Emerald Network is not required. The list below presents those species for which the Natura 2000 network must be established, but for which the Emerald Network has not been designated.

Table 6. Species requiring the establishment of the Natura 2000 network but not covered by the Emerald Network

Annex to the Habitats Directive and category	Number of species	Description	Examples of species	Explanation
Annex II	162	Species requiring the designation of Special Areas of Conservation (SACs)	Emerald Network sites in Ukraine have been designated for 142 species, except: <i>Barbus carpathicus</i> , <i>Barbus petenyi</i> , <i>Alburnus sarmaticus</i> , <i>Romanogobio belingi</i> , <i>Romanogobio vladykovi</i> , <i>Rutilus virgo</i> , <i>Sabanejewia baltica</i> , <i>Vertigo geyeri</i> , <i>Lindenia tetraphylla</i> ,	<i>Barbus carpathicus</i> , <i>Barbus petenyi</i> , <i>Alburnus sarmaticus</i> , <i>Romanogobio belingi</i> , <i>Romanogobio vladykovi</i> , <i>Rutilus virgo</i> , <i>Sabanejewia baltica</i> are not included in Resolution 6; therefore, Emerald Network sites were not designated for them



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Annex to the Habitats Directive and category	Number of species	Description	Examples of species	Explanation
			<p><i>Limoniscus violaceus</i>, <i>Glyphipterix loricatella</i>, <i>Nymphalis vaualbum</i>, <i>Isophya stysi</i>, <i>Odontopodisma rubripes</i>, <i>Pholidoptera transsylvanica</i>, <i>Stenobothrus eurasius</i>, <i>Miniopterus schreibersii</i>, <i>Monachus monachus</i>, <i>Caldesia parnassifolia</i>, <i>Colchicum arenarium</i></p> <p>Virtually all species are represented within the protected areas network</p>	
Annex II / Y	126	Species included in the relevant Annex of the Habitats Directive (explicitly mentioned in the text)	For 113 species, Emerald Network sites have been designated in Ukraine, except: <i>Vertigo geyeri</i> , <i>Lindenia tetraphylla</i> , <i>Limoniscus violaceus</i> , <i>Glyphipterix loricatella</i> ,	<p><i>Vertigo geyeri</i>, <i>Miniopterus schreibersii</i>, <i>Monachus monachus</i> are considered extinct in Ukraine (Red Data Book of Ukraine).</p> <p><i>Lindenia tetraphylla</i>, <i>Limoniscus violaceus</i>, <i>Glyphipterix loricatella</i>, <i>Nymphalis vaualbum</i>,</p>



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Annex to the Habitats Directive and category	Number of species	Description	Examples of species	Explanation
			<p><i>Nymphalis vaualbum</i>, <i>Isophya stysi</i>, <i>Odontopodisma rubripes</i>, <i>Pholidoptera transsylvanica</i>, <i>Stenobothrus eurasius</i>, <i>Miniopterus schreibersii</i>, <i>Monachus monachus</i>, <i>Caldesia parnassifolia</i>, <i>Colchicum arenarium</i></p>	<p><i>Isophya stysi</i>, <i>Odontopodisma rubripes</i>, <i>Pholidoptera transsylvanica</i>, <i>Stenobothrus eurasius</i>, <i>Caldesia parnassifolia</i> – have recent fragmented but confirmed distribution data in Ukraine.</p> <p><i>Colchicum arenarium</i> (in Ukraine as <i>C. fominii</i> – synonym)</p>
Annex II / Y-CTC	20	Species included at the level of a combined taxon concept – protection applies to a group of species without differentiation between individual taxa	<p><i>Barbus carpathicus</i>, <i>Barbus petenyi</i>, <i>Alburnus sarmaticus</i>, <i>Romanogobio belingi</i>, <i>Romanogobio vladykovi</i>, <i>Rhodeus amarus</i>, <i>Rutilus virgo</i>, <i>Sabanejewia baltica</i>, <i>Romanogobio kesslerii</i>, <i>Romanogobio albipinnatus</i>, <i>Romanogobio uranoscopus</i>, <i>Rhynchocypris percunurus</i>, <i>Osmoderma barnabita</i>, <i>Euphydryas</i></p>	<p><i>Barbus carpathicus</i>, <i>Barbus petenyi</i>, <i>Alburnus sarmaticus</i>, <i>Romanogobio belingi</i>, <i>Romanogobio vladykovi</i>, <i>Rutilus virgo</i>, <i>Sabanejewia baltica</i> are not included in Resolution 6.</p> <p><i>Elaphe quatuorlineata</i>, <i>Elaphe situla</i>: specific explanatory case – reptiles (Marushchak, Nekrasova) *.</p> <p>All species are represented within protected areas</p>



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Annex to the Habitats Directive and category	Number of species	Description	Examples of species	Explanation
			<i>matura</i> , <i>Morimus asper</i> <i>funereus</i> , <i>Elaphe sauromates</i> , <i>Zamenis situla</i> , <i>Klasea lycopifolia</i> , <i>Himantoglossum jankae</i> , <i>Pontechium maculatum</i> subsp. <i>maculatum</i>	
Annex II / Y-CTC-EXCP	2	As Y-CTC, but with exceptions for specific countries	<i>Cobitis elongatoides</i> , <i>Cottus microstomus</i>	Emerald Network sites in Ukraine have been designated at the level of combined taxa (<i>Cobitis taenia</i> , <i>Cottus gobio</i>), which correspond in the Habitats Directive to <i>Cobitis elongatoides</i> and <i>Cottus microstomus</i>
Annex II / Y-EXCP	8	Species included in the Annex but with general exceptions for certain countries	<i>Lampetra planeri</i> , <i>Aspius aspius</i> , <i>Cobitis taenia</i> , <i>Cottus gobio</i> , <i>Castor fiber</i> , <i>Canis lupus</i> , <i>Ursus arctos</i> , <i>Lynx lynx</i>	In Ukraine, Emerald Network sites have been designated for all 8 species
Annex II / Y-HTL	6	Species included at a higher taxonomic level (higher-taxonomic-level listing), e.g. protection applies to a genus or family rather than a specific species	<i>Zingel spp.</i> (except <i>Zingel asper</i> and <i>Zingel zingel</i>), <i>Eudontomyzon spp.</i> , <i>Alosa spp.</i>	In Ukraine, Emerald Network sites have been designated for all 6 species. All species are represented within protected areas

Y – explicitly listed in the Annex of the Directive; CTC – combined taxon concept; EXCP – exception to application; HTL – included at a higher taxonomic level

*** *Elaphe quatuorlineata* or *Elaphe sauromates***

*In 1998, when Resolution No. 6 of the Bern Convention was adopted, and subsequently during the development of the first animals reference lists, this snake species (as currently known from the territory of Ukraine) was treated as a subspecies of the four-lined snake, *Elaphe quatuorlineata sauromates* (Schulz, 1996; Stoev, 2000). Accordingly, in the relevant reference list for Ukraine, the species was recorded as the four-lined snake under the species name *Elaphe quatuorlineata*.*

*Later, in the 2010s, scientific studies began to emerge confirming the independent species status of the Sarmatian rat snake as a distinct species (<https://reptile-database.reptarium.cz/Elaphe/sauromates>) (Kornilios et al., 2014). As a result, the former subspecies has since been treated as *Elaphe sauromates*—a species that is also available in dropdown species lists when completing Standard Data Forms in the SDF Manager.*

*At the biogeographical seminar in Moldova (2016), representatives of the Bern Convention Secretariat clarified, in response to a question regarding which species should be indicated for Ukrainian sites within the steppe biogeographical region, that—taking into account taxonomic changes—the species now known as *Elaphe sauromates* should be considered equivalent to *Elaphe quatuorlineata* in the context of completing Standard Data Forms for Emerald Network sites.*

*In the future, it would be appropriate to update the animals reference list for Ukraine by replacing *Elaphe quatuorlineata* with *Elaphe sauromates*.*

***Elaphe situla* or *Zamenis situla*?**

*In this case, the issue does not concern a change of species, but rather a taxonomic revision at the genus level (a new combination). Since the compilation of the animals reference list for Ukraine, the scientific name of the leopard snake, *Elaphe situla* (Engelmann et al., 1993; Schulz, 1996), has been revised in line with subsequent taxonomic updates and is now generally used as *Zamenis situla* (Venchi & Sindaco, 2006; Speybroeck, 2007; Wallach et al., 2014; Kwet & Trapp, 2015).*

In this context, it would be advisable to initiate discussions at future biogeographical seminars on the harmonisation of taxonomic names listed in Resolution No. 6 with their currently valid equivalents (including the indication of synonyms to ensure both legal and scientific consistency).

At the same time, in the Annexes and accompanying lists of the Bern Convention, this taxon may appear in different formats (either as a species or in the context of subspecies interpretations), which further highlights the need for standardisation of nomenclature and clear indication of synonymy in working documents.

Detailed information on each species of flora and fauna listed in Annex II of the Habitats Directive and occurring in Ukraine is provided in Annexes 2 and 3 to this Report.

Priority species of fauna and flora under the Habitats Directive

Annex I of the Habitats Directive identifies natural habitat types (biotopes) that are considered priority. Annex II of the Habitats Directive also designates priority species. In contrast, Resolutions No. 4 (1996) and No. 6 (1998) of the Bern Convention do not provide the designation of priority habitat types or species of fauna and flora.

In Ukraine, 16 species listed as priority in the Annexes of the Habitats Directive are present: *Osmoderma eremita*, *Rosalia alpina*, *Canis lupus*, *Ursus arctos*, *Mustela lutreola*, *Jurinea cyanoides*, *Spermophilus suslicus*, *Bison bonasus*, *Pseudogaurotina excellens*, *Nymphalis vaualbum*, *Xylomoia strix*, *Campanula serrata*, *Stipa zalesskii*, *Euplagia quadripunctaria*, *Rhynchocypris percunurus*, *Klasea lycopifolia*. These species belong to different taxonomic groups (invertebrates, vertebrates, and vascular plants) and vary significantly in terms of rarity, distribution, and conservation status at both national and international levels.

The analysis of these species indicates that the category of “priority species” is not homogeneous in terms of requirements for site-based protection, and the application of a uniform approach to all such species is methodologically unjustified. Taking into account the actual status of populations, distribution, and the biogeographical context, priority species occurring in Ukraine should be differentiated into at least two functional groups:

Species that are relatively widespread in Ukraine:

This group includes species that are designated as priority in the Annexes of the Habitats Directive but do not meet the criteria of localisation and uniqueness within Ukraine that would typically justify the need for complete site-based coverage. In particular, this applies to species such as *Canis lupus*, *Jurinea cyanoides*, and, likely, *Campanula serrata*.

These species are characterised by: relatively wide or mosaic distribution in Ukraine; lack of strict association with a limited set of sites; stable or insufficiently defined population trends; and the possibility of effective conservation through general legal protection regimes rather than through the designation of Special Areas of Conservation.

Species that are rare and vulnerable in Ukraine:

Other priority species occurring in Ukraine are characterised by a high level of rarity, localised distribution, negative population trends, or biogeographical uniqueness. This group includes, in particular, species listed in the Red Data Book of Ukraine as endangered or vulnerable, as well as species with a limited number of known localities. For such species, the conservation of populations is directly dependent on the protection of their habitats.

Certain priority species occurring in Ukraine are subject to specific provisions regarding the application of Annex II of the Habitats Directive. For example, *Canis lupus* and *Ursus arctos* are assigned the status Y-EXCP in Annex II, which indicates a contextual, or country-specific, applicability of the requirements for the designation of Special Areas of Conservation. In other words, these species are not considered to require mandatory site-based coverage of all or most

of their national range; instead, their conservation is primarily based on general legal protection regimes and species-specific measures.

Certain types of natural habitats listed in Annex I of the Habitats Directive are also designated as priority. Since there is no direct correspondence between habitat types listed in Resolution No. 4 (1996) of the Bern Convention and those in Annex I of the Habitats Directive, they are not addressed in this study.

Comparison of bird species for which the Emerald Network and the Natura 2000 network are established

The process of establishing the Emerald Network does not provide for the creation of a separate network for birds. Emerald Network sites are designated as areas important for the conservation of species and habitats, including birds listed in Resolution No. 6 (1998) of the Bern Convention.

Under the Birds Directive, a separate network of sites is established for the conservation of bird species listed in Annex I of the Directive, as well as for migratory bird species—namely, the network of Special Protection Areas (SPAs).

An important role in the spatial justification of bird conservation is played by Important Bird Areas (IBAs), identified on the basis of internationally recognised ornithological criteria. In Ukraine, IBAs identify key sites for breeding, migration stopovers, moulting, and wintering of birds, including species listed in Annex I. At the same time, IBAs have a scientific and expert-based status and do not, in themselves, establish a mandatory legal protection regime unless they are integrated into the national system of protected areas or other legally binding mechanisms (although most of them are designated as protected areas of national importance). A separate category is represented by wetlands of international importance designated under the Ramsar Convention. A significant proportion of such sites in Ukraine are of exceptional importance for the conservation of wetland and migratory bird species, including those listed in Annex I of the Birds Directive. Ramsar sites provide international recognition of the importance of these areas and establish a general framework for their conservation; however, they do not create a specific protection regime for birds comparable in scope and purpose to the SPA regime established under EU law.

Thus, the national system of site-based protection for bird species listed in Annex I in Ukraine is based on a combination of heterogeneous instruments—Emerald Network sites, Important Bird Areas (IBAs), and Ramsar sites—which partially overlap in terms of both spatial coverage and species composition. However, these instruments do not form a single, coherent system of habitat-based bird protection specifically designed to meet the requirements of the Birds Directive regarding special conservation measures for Annex I species and migratory birds.

An analysis of the species composition of Annex I of the Birds Directive in the context of Ukraine shows that, out of 382 species listed at the EU level, 130 species have been recorded in Ukraine, of which 101 are breeding species. Thus, for a significant proportion of Annex I species, Ukraine is not only a migration corridor or an area of occasional occurrence, but also a country of population reproduction, which substantially increases the importance of habitat protection regimes for these species.

For 114 out of 130 bird species occurring in Ukraine, Emerald Network sites have been designated, covering their habitats, breeding sites, seasonal aggregation areas, or migratory stopover locations. This indicates a high level of spatial identification of areas important for birds and generally corresponds to the requirement of the Birds Directive to designate Special Protection Areas for Annex I species. At the same time, for 8 Annex I species present in Ukraine, no Emerald Network sites have been designated. This group includes both species with occasional or irregular records and certain rare or breeding species. In particular, *Neophron percnopterus* and *Falco naumanni*, despite being included in the Red Data Book of Ukraine, do not have corresponding site-based coverage within the Emerald Network. Other species in this group (including *Zapornia parva*, *Zapornia pusilla*, *Luscinia svecica svecica*, *Ficedula semitorquata*, *Phoenicopterus roseus*) are breeding or regularly occurring but are characterised by limited or localised distribution, which partly explains the absence of designated sites.

However, the existence of Emerald Network sites does not in itself ensure full compliance with the requirements of the Birds Directive for Annex I species. The Directive requires not only the identification of sites, but also the implementation of specific conservation measures for habitats aimed at maintaining or restoring a favourable conservation status of populations. In the national system, such specialised regimes for birds are not formulated as mandatory, and habitat protection is implemented mainly within general protected area regimes. Thus, the protection regime for Annex I species in Ukraine is characterised by a high level of spatial coverage of key areas, but limited alignment with the substantive requirements of the Birds Directive regarding specific conservation measures for their habitats. For most species, protection remains general or fragmented and is not always specifically tailored to the ecological requirements of birds throughout their full life cycle.

Table 7. Species listed in Annex I of the Birds Directive for which Emerald Network sites have not been designated

Annex of the EU Birds Directive and category	Number of species	Description	Examples of species	Explanation
Annex I	130	Species for which Member States must designate and classify Special Protection Areas (SPAs)		
Annex I / Y	107	Species explicitly listed in the Annex (named in the text of the Directive)	For 100 species in Ukraine, Emerald Network sites have been designated, except:	<i>Falco naumanni</i> and <i>Ficedula semitorquata</i> are rare breeding species in Ukraine; <i>Falco eleonora</i> is known only from



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Annex of the EU Birds Directive and category	Number of species	Description	Examples of species	Explanation
			<p><i>Neophron percnopterus</i>, <i>Falco naumanni</i>, <i>Falco eleonora</i>, <i>Falco rusticolus</i>, <i>Ficedula semitorquata</i>, <i>Puffinus yelkouan</i>, <i>Eudromias morinellus</i></p>	<p>Crimea; <i>Neophron percnopterus</i> and <i>Falco naumanni</i> are listed in the Red Data Book of Ukraine (endangered); <i>Puffinus yelkouan</i> is a vagrant in the Black Sea</p>
Annex I / Y-CTC	17	Included as part of a combined taxon concept — protection applies to a group of species without differentiation	<p><i>Luscinia svecica</i>, <i>Phoenicopterus ruber</i>, <i>Hieraaetus fasciatus</i>, <i>Hoplopterus spinosus</i>, <i>Nyctea scandiaca</i>, <i>Calonectris diomedea</i>, <i>Aquila pomarina</i>, <i>Aquila clanga</i>, <i>Philomachus pugnax</i>, <i>Larus minutus</i>, <i>Sterna sandvicensis</i>, <i>Dendrocopos medius</i>, <i>Phalacrocorax pygmeus</i>, <i>Tetrao tetrix tetrix</i>, <i>Porzana parva</i>, <i>Porzana</i></p>	<p>Emerald Network sites in Ukraine have been designated for 10 species, except: <i>Phoenicopterus roseus</i>, <i>Aquila fasciata</i>, <i>Vanellus spinosus</i>, <i>Bubo scandiacus</i>, <i>Calonectris borealis</i>, <i>Zapornia parva</i>, <i>Zapornia pusilla</i>; <i>Phoenicopterus roseus</i> and <i>Aquila fasciata</i> are now breeding species in Ukraine</p>

Annex of the EU Birds Directive and category	Number of species	Description	Examples of species	Explanation
			<i>pusilla, Sterna caspia</i>	
Annex I / Y-CTC-EXCP	1	As Y-CTC, but with exceptions in scope of application	<i>Calidris alpina</i>	
Annex I / Y-HTL	5	Included at a higher taxonomic level (e.g. genus/family level)	<i>Luscinia svecica, Sterna albifrons, Porzana pusilla, Sterna caspia, Porphyrio porphyrio</i>	Emerald Network sites in Ukraine have been designated for: <i>Sterna albifrons, Porzana pusilla, Sterna caspia</i>

Y – explicitly listed in the Annex of the Directive; CTC – combined taxon concept; EXCP – exception to application; HTL – included at a higher taxonomic level

It should be noted that Special Protection Areas (SPAs) are designated not only for bird species listed in Annex I of the Birds Directive, but also for other regularly occurring migratory species, even if they are not included in the Annex.

Below is a list of regularly occurring migratory bird species present in Ukraine but not included in Annex I of the Birds Directive.

Table 8. Regularly occurring migratory bird species not included in Annex I of the Birds Directive

A039	<i>Anser fabalis</i>	Anatidae	Bean Goose
A043	<i>Anser anser</i>	Anatidae	Greylag Goose
A052	<i>Anas crecca</i>	Anatidae	Common Teal
A053	<i>Anas platyrhynchos</i>	Anatidae	Mallard
A054	<i>Anas acuta</i>	Anatidae	Northern Pintail
A059	<i>Aythya ferina</i>	Anatidae	Eurasian Wigeon
A061	<i>Aythya fuligula</i>	Anatidae	Tufted Duck



A112	<i>Perdix perdix</i>	Phasianidae	Grey Partridge
A125	<i>Fulica atra</i>	Пастушкові	Eurasian Coot
A152	<i>Lymnocyptes minimus</i>	Scolopacidae/ Gallinaginidae	Jack Snipe
A153	<i>Gallinago gallinago</i>	Scolopacidae/ Gallinaginidae	Common Snipe
A155	<i>Scolopax rusticola</i>	Scolopacidae/ Gallinaginidae	Eurasian Woodcock
A208	<i>Columba palumbus</i>	Columbidae	Common Wood Pigeon
A855	<i>Mareca penelope</i>	Anatidae	Eurasian Wigeon
A856	<i>Spatula querquedula</i>	Anatidae	Garganey
A857	<i>Spatula clypeata</i>	Anatidae	Northern Shoveler
A889	<i>Mareca strepera</i>	Anatidae	Gadwall

The overall table of correspondence between bird species listed in Resolution No. 6 (1998) of the Bern Convention and Annex I of the Birds Directive is provided in Annex 4 to this Report.

Overview of existing management practices and their evaluation

General overview of the provisions of the Habitats Directive and the Birds Directive regarding management practices

Article 6(1) of the Habitats Directive requires Member States to establish the necessary conservation measures for Special Areas of Conservation (SACs). Each SAC has specific ‘sites of conservation’ or ‘features of interest’ which include one or more habitat types listed in Annex I and/or species listed in Annex II. For each of these sites, site-specific conservation objectives must be set, although this is not explicitly stated in the Directive. The conservation objectives define the desired level of conservation, which may consist of maintaining the current status or improving it. The Directive requires a minimum level of conservation, which is the maintenance of the current status, and improvement is not mandatory but depends on the policy of the Member State. Once conservation objectives have been established for all habitat types and species on the site, appropriate conservation measures must be defined. These measures must ensure that the conservation objectives are achieved in the long term.

Although management plans are a valuable tool for organising and communicating conservation efforts, they generally do not have legal force. Article 6(1) therefore requires the implementation of additional measures to ensure the effective implementation of conservation measures and the proper conservation of the sites: legislative measures (national legislation), administrative measures (decisions by competent authorities) or contractual measures (e.g. agreements with landowners). These additional measures are distinct from the conservation measures themselves, as they concern the practical implementation and enforcement of the management plan or its equivalent.

The ultimate obligation remains the effective implementation of conservation measures, whether detailed in a management plan or implemented through other equivalent mechanisms. The Habitats Directive gives Member States flexibility in defining these measures, provided that they are appropriate to achieve the conservation objectives set.

Conservation objectives and measures

The European Commission has provided guidance on setting Conservation Objectives and implementing Conservation Measures. According to the guidance document "Management of Natura 2000 sites"¹¹, developed by the European Commission, “site-level conservation objectives are a set of specific goals to be achieved on a site in order to ensure its best contribution to achieving Favourable Conservation Status (FCS) at the appropriate level (national or regional, taking into account the natural range of the species or habitats concerned)”¹². Furthermore, in its note, the European Commission states: “While it may be practically impossible for Member States to formulate conservation objectives in the context of a SPA defined at a level that includes the territory of another Member State, the use of a biogeographical perspective will facilitate the process of setting such objectives. Objectives at site level should be set not only for Special Areas

¹¹ European Commission. 2012. “Commission note on setting conservation objectives for Natura 2000 sites.”, p. 4

¹² European Commission. 2018. Commission Notice “Managing Natura 2000 sites”, p.17

of Conservation (SACs) under the Habitats Directive but also for Special Protection Areas (SPAs) under the Birds Directive, in order to fulfil the requirements set out in Articles 2, 4.1, 4.2 and 4.4 of the Directive”¹³.

Conservation objectives, according to the Commission note, “at site level, the ecological requirements of the species and habitat types listed in the Natura 2000 Standard Data Form (i.e. present on the site, excluding those whose presence is insignificant according to the SDF) should be fully taken into account in particular”¹⁴.

In its recommendations, the European Commission states: “Conservation objectives for Natura 2000 sites should be as clear and understandable as possible and allow for operational conservation measures to be implemented in practice. They should be specifically defined and, where possible, measurable in terms of numbers and/or size. In other words, the definition of conservation objectives at site level should not be vague, ill-defined, unverified or include unclear obligations to implement specific conservation measures.”¹⁵

It is also recommended to follow a certain standard when defining conservation objectives:

- **"be specific** - relate to a specific object of conservation importance (species or habitat) and define the condition(s) that must be met to achieve the conservation objective;
- **be measurable and reportable**– provide the possibility of monitoring to determine whether the objectives have been achieved preservation, and for the purposes of Article 17 of the Habitats Directive;
- **be realistic**– taking into account reasonable deadlines and the use of resources;
- **be consistent in approach**– the structure of conservation objectives should, as far as possible, be the same for all areas, and in areas supporting the same conservation value, similar attributes and objectives should be used to describe favourable status;
- **be comprehensive**– attributes and goals should cover the properties of the studied trait necessary to describe its state as favourable or unfavourable”¹⁶.

Conservation measures, on the other hand, “are the actual mechanisms and measures that must be implemented for a Natura 2000 site in order to achieve its conservation objectives.”¹⁷. “The obligation is to establish the necessary measures, whether these measures apply within individual areas or, in some cases, outside areas or across several areas. It is possible that a significant part of a Member State’s compliance with the requirements of Article 6.1 consists of measures that are not specific to particular areas. According to Article 6.1, conservation measures for SAC must be consistent with the ecological requirements of the types natural habitats of Annex I and Annex II species present on the site. Conservation measures are usually established at local/territorial level, but can also be developed at regional or national level, or even agreed at transboundary, biogeographical or EU level. They may include sites that are not part of the Natura

¹³European Commission. 2012. “Commission note on setting conservation objectives for Natura 2000 sites.”, p. 3

¹⁴ European Commission. 2012. "Commission note on setting conservation objectives for Natura 2000 sites p. 6

¹⁵ European Commission. 2012. “Commission note on setting conservation objectives for Natura 2000 sites.”

¹⁶ European Commission. 2012. “Commission note on setting conservation objectives for Natura 2000 sites.”, p.6-7

¹⁷European Commission. 2013. "Commission note on establishing conservation measures for natura 2000 sites", p. 3

2000 network (horizontal measures or measures for national ecological networks, integrity, etc.)”¹⁸.

Duty to prevent deterioration

Article 6(2) further emphasizes the obligation to prevent the deterioration of habitats and species protected in the territories of the SAC.

Member States are required to take preventive measures to avoid deterioration and disturbance associated with the envisaged event, activity or process. These measures apply to all species and habitats for which the sites have been designated and must be implemented, where necessary, also outside the sites.

The legal regime under Article 6(2) must be specific, coherent and comprehensive, capable of ensuring effective protection of the sites concerned. Member States have discretion in taking appropriate measures to implement Article 6(2), provided that they ensure that deterioration and disturbance will not occur.

If a review of the plan or project is necessary to comply with the provisions of Article 6(2), it shall be carried out in accordance with the requirements of Article 6(3).

Reporting

According to the Habitats Directive, every six years Member States are required to submit a report on the implementation of the Directive (Article 17). This report includes information on conservation measures, their impact on conservation status and the results of monitoring activities. A key component is an assessment of the conservation status of all listed habitats and species according to an agreed methodology and taking into account the Favourable Conservation Status (FCS). The assessment covers the entire national territory for each biogeographical region, providing a broader picture rather than specific information for individual sites.¹⁹

According to the Birds Directive, Member States are required to submit reports on the implementation of the Directive every three years (Article 12). The Commission then draws up a summary report on the basis of these national parts. In addition, reports are required annually on the implementation of any derogations from the conservation measures provided for in Articles 5 and 8 (Article 9). These derogations must be compatible with the general objectives of the Directive.²⁰

¹⁸European Commission. 2012. “Commission note on setting conservation objectives for Natura 2000 sites.”, p. 4

¹⁹ Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

²⁰Directive 2009/147/ec of the european parliament and of the council of 30 November 2009 on the conservation of wild birds (codified version)

Overview of the Bern Convention's provisions on management practices

The Bern Convention imposes on Contracting Parties the obligation to take appropriate and necessary legislative and administrative measures to ensure the conservation of habitats of species of wild flora and fauna (especially species included in Appendices I and II) and the conservation of natural habitats threatened with extinction (natural habitats). This basic obligation directly follows from Article 4 of the Convention and is the basis for the management of habitats and species protected through the Emerald Network instruments²¹.

The Emerald Network is an ecological network of Areas of Special Conservation Interest (ASCIs) established by Recommendation No. 16 (1989). It is considered one of the key practical mechanisms for implementing the obligations of Parties to the Bern Convention on the conservation of natural habitats.

Management objectives and measures

The Emerald Network management model is built around management objectives and the actions needed to achieve them. Resolution No. 8 (2012) explicitly states that specific short- and long-term site-level objectives should be developed for the management of Emerald sites, aligned with national/regional conservation goals, to facilitate monitoring of implementation and regular assessment of achievement²².

Once objectives have been set, the next step is to identify the management/protection measures that need to be implemented to achieve these objectives.

As in the case of Natura 2000, the management plan itself is not a binding document, although it is a valuable tool for organising and communicating conservation actions. Resolution No. 8 (2012) therefore takes a broader approach, clarifying that the key is the existence of an effective conservation regime, not the existence of a document as such. Such a regime may include administrative measures (decisions of competent authorities) and contractual measures (e.g. agreements) that ensure the practical implementation of the planned actions²³.

Recommendation No. 16 recommends that Contracting Parties, where appropriate, take steps to ensure that the management of territories is systematic:

- «develop and implement management plans that define short- and long-term goals (such plans may relate to a single area or group of areas, for example, a specific type of landscape/ecosystem);
- regularly review the provisions of management plans in light of changing conditions or increasing scientific knowledge;
- clearly define the boundaries of territories on maps and, as far as possible, on the ground;

²¹Convention on the Conservation of European Wildlife and Natural Habitats

²² Bern Convention Standing Committee, Resolution No. 8 (2012) on national designation and management/monitoring/reporting of Emerald sites

²³Bern Convention Standing Committee, Resolution No. 8 (2012) on national designation and management/monitoring/reporting of Emerald sites

- inform competent authorities and landowners/land users about the scale of the territory and its characteristics to ensure consistent consideration of the regime in use decisions and practices;
- ensure monitoring of such areas, in particular factors whose conservation is critical to their conservation value.”²⁴.

Monitoring as a component of management

Recommendation No. 16 (1989) further recommends that Contracting Parties regularly review their performance in implementing the Emerald Network and ensure that appropriate ecological and other studies are carried out to better understand critical management elements and monitor the status of the factors that led to the designation and conservation of the area.²⁵

In turn, Resolution No. 8 (2012) states that “monitoring of the management of the area will include regular surveillance of the implementation of the protection regime and the conservation status of populations of species and natural habitats, in particular those listed in Standing Committee Resolutions No. 4 (1996) and No. 6 (1998), and/or other factors that led to the designation of the area, as specified in paragraph 1 of Recommendation 16 (1989)”²⁶.

Thus, as in the case of Nature 2000, monitoring is one of the elements of the management mechanism that provides verification of the implementation of measures, identification of problems and the basis for adjusting objectives/measures.

Reporting

Resolution No. 8 (2012) establishes regular reporting to the Bern Convention Secretariat. The report must be submitted in English every six years from the date of adoption of the resolution and must cover the previous six-year period.²⁷

Separately, Resolution No. 8 (2012) itself refers to the approach laid down in Resolution No. 5 (1998), where governments are invited to “monitor the conservation status of species and natural habitats in designated ASCIs” and “inform the Secretariat of any significant changes likely to have a significant adverse effect on the ecological character of designated ASCIs or on the conditions that justified their designation.”²⁸.

²⁴ Bern Convention Standing Committee, Recommendation No. 16 (1989) on Areas of Special Conservation Interest, paragraph 4

²⁵ Bern Convention Standing Committee, Recommendation No. 16 (1989) on Areas of Special Conservation Interest

²⁶ Bern Convention Standing Committee, Resolution No. 8 (2012) on national designation and management/monitoring/reporting of Emerald sites, paragraph 3.2

²⁷ Bern Convention Standing Committee, Resolution No. 8 (2012) on national designation and management/monitoring/reporting of Emerald sites

²⁸ Bern Convention Standing Committee, Resolution No. 8 (2012) on national designation and management/monitoring/reporting of Emerald sites, recital 15 (Preamble)

Analysis of selected examples of national implementation of Emerald Network projects

Although neither the Bern Convention nor the EU Directives establish a mandatory requirement for the development of management plans for Natura 2000 sites and Emerald Network sites, their preparation is strongly recommended. In Ukraine, the development of management plans for the Emerald Network is still at an early stage. To date, only one management plan has been developed for an Emerald Network site—the management plan for the Emerald Network site “Pyryatynskyi National Park.” However, many Emerald Network sites are located within larger areas for which management documents have already been developed.

To assess the potential of these existing documents for managing Emerald Network sites, a set of criteria and guiding questions was developed, based on the requirements for management plans defined for Natura 2000 sites, as outlined below (Table 9).

Four documents were selected for analysis:

the Management Plan for the Pyryatynskyi National Park (Emerald Network site Pyryatynskyi National Nature Park UA0000077);

the Forest Management Project of the Klavdiivka Research Forestry Station (Emerald Network sites Klavdiivska Forest Station – Kyivske Reservoir UA0000094 and Irpin River Valley UA0000342);

the Danube River Basin Management Plan (2025-2030), within which 25 Emerald Network sites are located, covering approximately 17% (5,059.07 km²) of the basin area;

the Project for the Organization of the Territory of the Holosiivskyi National Park (Emerald Network site Holosiivskyi National Nature Park UA0000043).

The comparison revealed significant shortcomings in the current approach to the management of Emerald Network sites in Ukraine.

Although the Management Plan for the Pyryatynskyi National Park, which is the only management plan specifically developed for an Emerald Network site, demonstrated a higher level of alignment with the expected functions of a management plan, it still did not meet all the necessary requirements in terms of clarity, quantified objectives, comprehensive threat assessments, and detailed protocols for immediate intervention.

On the other hand, the Forest Management Project of the Klavdiivka Research Forestry Station, the Danube River Basin Management Plan, and the Project for the Organization of the Territory of the Holosiivskyi National Park failed to adequately address the specific conservation requirements of Emerald Network sites and to tackle their management challenges. They lack the necessary level of detail, site-specificity, and integrated approach required for effective conservation.

A summary of the results of the comparison of criteria and guiding questions used to assess the potential of these existing documents for managing Emerald Network sites is presented in Table 9.

Table 9. Summary of the results of the comparison of criteria and guiding questions for assessing the potential of existing documents in the management of Emerald Network sites



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Criteria / Questions	Management Plan for the Pyryatynskyyi National Park	Forest Management Project of the Klavdiivka Research Forestry Station	Danube River Basin Management Plan (2025–2030)	Project for the Organization of the Territory of the Holosiivskyyi National Park
Establishment of conservation objectives				
1. Are conservation objectives clearly defined, specific, measurable, achievable, relevant and time-bound (SMART)?	partially	-	-	partially
2. Are they established in the management plan or its equivalents?	partially	-	-	partially
3. Does the management plan or its equivalent provide for specific measures and timeframes for achieving the conservation objectives?	+	-	-	+
4. Are conservation objectives periodically reviewed and adjusted based on new data, new threats or changes in the ecological requirements of the site?	+	-	-	+
Site selection and mapping				
5. Are site boundaries well documented, clearly defined and publicly available to stakeholders?	+	+	+	+
Adaptive management and response to threats				
6. Are conservation measures periodically reviewed and adjusted based on new data, new threats or changes in the ecological requirements of the site?	+	-	-	+



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Criteria / Questions	Management Plan for the Pyryatynskiy National Park	Forest Management Project of the Klavdiivka Research Forestry Station	Danube River Basin Management Plan (2025–2030)	Project for the Organization of the Territory of the Holosiivskiy National Park
7. To what extent do conservation measures take into account ecological needs and socio-economic factors?	+	partially	partially	partially
8. Are threats identified and recorded in management plans or their equivalents?	partially	-	-	-
9. How are threats addressed in management plans or their equivalents?	+	-	-	-
Monitoring and mitigation of deterioration and disturbance				
10. Are appropriate measures taken to avoid habitat deterioration and disturbance of species, and is there a protocol for immediate action if detected?	+	-	-	partially
11. How are significant changes or disturbances monitored?	+	-	-	partially
12. Does the management strategy include protocols for immediate intervention in case of detected habitat deterioration or disturbance of species?	-	-	-	-
Management of socio-economic pressures				
13. How do conservation measures take into account the needs of local communities, and are provisions in place for sustainable activities?	+	partially	partially	partially
Management, implementation and delivery of conservation measures				



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Criteria / Questions	Management Plan for the Pyryatynskiy National Park	Forest Management Project of the Klavdiivka Research Forestry Station	Danube River Basin Management Plan (2025–2030)	Project for the Organization of the Territory of the Holosiivskiy National Park
14. Are conservation measures documented, realistic and structured with clear tasks, timelines and responsibilities for implementation?	+	-	-	partially
15. Is there a management plan or another document with an equivalent function for the Emerald Network site?	+	partially	partially	+
16. Are management plans publicly available and understandable?	+	partially	+	+
Stakeholder and landowner involvement				
17. Are stakeholders involved in the planning and implementation of conservation measures?	+	-	-	partially
18. Are there established mechanisms for consultation and stakeholder engagement?	partially	-	partially	partially
19. To what extent are stakeholders involved in setting objectives, monitoring results and ensuring alignment of conservation measures with community needs?	partially	-	-	partially
20. Are management plans adapted based on new scientific information and emerging threats?	+	partially	partially	+

Detailed information with explanations for each assessment is provided in Annex 5 to this Report.

Conclusions

The Emerald Network in Ukraine covers the majority of species listed in Annex II of the Habitats Directive, with the exception of certain species. In addition, for some species, fragmented or outdated taxonomic approaches have been identified, which require harmonisation.

The analysis of species representation within the Emerald Network, based on the results of biogeographical seminars, indicates a significant proportion of species with insufficient or moderate levels of coverage, as well as the presence of assessments requiring data clarification. This applies to both flora and fauna, including birds. Only a proportion of species have a sufficient level of territorial coverage capable of ensuring long-term conservation. For a considerable number of species, adjustments to site boundaries, expansion of the network, or refinement of scientific information on their distribution and population status are required.

In the field of bird protection, the implementation of the Birds Directive also remains incomplete. Despite the existence of national protected areas, Important Bird Areas (IBAs), and Ramsar sites, there is no dedicated mechanism for the classification of Special Protection Areas within the meaning of the Directive.

The analysis of current management approaches shows that the European management model is based on the definition of conservation objectives for specific sites, the establishment of appropriate measures, and their implementation through legal, administrative, or contractual instruments. In addition, monitoring of management effectiveness is carried out, and relevant reporting is ensured. Within the framework of the Bern Convention, the management of Emerald Network sites should also be based on an “appropriate regime”, including short- and long-term objectives, planning and regular review, clearly defined boundaries, informing competent authorities and land users, monitoring, and regular reporting on significant negative changes.

In Ukrainian practice, the management system for Emerald Network sites remains fragmented. A significant lack of specialised management instruments has been identified, particularly those that would consistently integrate objectives, measures, responsible actors, resources, monitoring, and review mechanisms. The analysis of the four selected documents confirms that sectoral or territorial plans mostly do not provide the necessary level of specificity for Emerald Network sites, while even the only dedicated management plan demonstrates the need to improve the clarity of objectives, the level of detail of measures, and response protocols.

Recommendations

Improving the management of Emerald Network sites in Ukraine requires a comprehensive and multi-faceted approach.

A critically important first step is the development and implementation of national legislation specifically focused on the management of Emerald Network sites and, subsequently, Natura 2000 sites. This legislation should comply with the legal requirements of the Bern Convention, the Habitats Directive and the Birds Directive, clearly defining categories of protected areas. It should establish legal obligations for setting conservation objectives in accordance with SMART principles, as well as the necessary conservation measures to be applied across all sites.

The legal framework should include mechanisms for regular monitoring and reporting on conservation status and progress towards achieving favourable conservation status (FCS), with clearly defined reporting requirements to the European Commission and under the Bern Convention.

Strengthening institutional capacity is also important. The development and regular updating of comprehensive national guidance on the preparation of site-specific management plans for Emerald Network/Natura 2000 sites is a key aspect.

The implementation of a national training programme for relevant stakeholders—including public authorities, site managers, landowners, NGOs, and local communities—on the application of these guidelines would be appropriate.

The establishment of a robust, well-resourced, transparent, and standardised national monitoring system is critically important for tracking changes in conservation status, identifying threats, and assessing the effectiveness of conservation measures across Emerald Network/Natura 2000 sites.

Ensuring adequate financial resources is fundamental to the success of these initiatives. A key step is the development of a long-term management and financing plan for Natura 2000 and Emerald Network sites. This plan should include funding sources (including EU funds, national and local budgets, as well as the private sector), specific allocations, distribution of responsibilities, a clear implementation timeline, and measurable indicators of success. The plan should comprehensively cover all aspects of management, including conservation measures, enforcement, monitoring, and capacity building. Transparency and accountability of financial mechanisms are critically important to ensure sufficient funding for achieving national conservation objectives.

The current analysis of Ukrainian management practices for Emerald Network sites reveals significant weaknesses, in particular the absence of dedicated management plans for specific sites. To address these issues, it is advisable that each Emerald Network site—or groups of geographically connected sites with similar natural characteristics—have detailed management plans that include SMART conservation objectives and specific measures with clearly defined timelines and responsible actors. These plans should be publicly available, preferably in simplified and adaptive formats for a wider audience.



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Development of proposals on transformation of the Emerald network to Natura 2000 network

It is important that such management plans include clear adaptive management frameworks, allowing for regular reviews (ideally on an annual basis) based on monitoring data, comprehensive threat assessments, and ecological requirements. Clear protocols for immediate intervention in cases of habitat degradation or disturbance of species are necessary.

Active stakeholder involvement at all stages of the process—from planning to the implementation of conservation measures, including the setting of site-level conservation objectives and the monitoring of results—is important within the EU context and should be encouraged at the national level. Robust monitoring protocols using indicators to track progress towards favourable conservation status, as well as transparent reporting mechanisms to communicate achieved results, are also essential.

[Annexes 1–5 are provided in separate files](#)