





First Look Solutions S.A.

# ESIA Study for Vifor Wind Farm, Romania

Rapid Critical Habitat Assessment Report

9 February 2024 Project No.: 0667256

Draft report v0.1 (rev 3) (revised to address comments received from the IFC)

Document details	
Document title	ESIA Study for Vifor Wind Farm, Romania
Document subtitle	Rapid Critical Habitat Assessment Report
Project No.	0667256
Date	9 February 2024
Version	0.1 draft (rev3)
Client Name	Low Carbon and Rezolv Energy

#### Document history

				ERM approval	to issue	
Version	Revision	Authors	Reviewed by	Name	Date	Comments
0.1 Draft	Rev1	Nehir Yildiz & Adam Teixeira-Leite	Les Hatton		19 July 2023	Preliminary Draft sent to Client
0.1 Draft	Rev2				14 August 2023	Updated draft based on revised turbine layout for July 2023
0.1 Draft	Rev3	-			9 February 2024	Updated version addressing IFC comments

## CONTENTS

EXEC		SUMMAR	דץ	V	
1.	INTRO	DUCTIO	Ν	1	
	1.1 1.2 1.3	Backgrou Project D Purpose	Ind Pescription of this Document	1 1 2	
2.	APPRO		ID METHODS	3	
	2.1	Delineate	e the Study Area and EAAAs for Key Species	3	
		2.1.1 2.1.2	Study Area for Volant Species Study Area for Non-Volant Species	3 4	
	2.2 2.3	Review a Assess b	nd verification of available information iodiversity values against EBRD & IFC Critical Habitat criteria	4 5	
		2.3.1	Apply Critical Habitat criteria and thresholds	5	
	2.4 2.5	Undertak Identify N	e field surveys to verify potential high priority species latural Habitat and Modified Habitat	4	
3.	FINDIN	IGS OF T	HE CRITICAL HABITAT ASSESSMENT	6	
	3.1 3.2	Criterion Criterion	1: Priority Ecosystems 2: Threatened Species & their habitats	6 9	
		3.2.1 3.2.2	Critical Habitat Qualifying Species PBF Qualifying Species	9 28	
	3.3	Criterion	2: Restricted-range species ( <i>and endemics – IFC PS6</i> )		
	3.4 3.5 3.6	Additiona Legally P	al: Areas associated with key evolutionary processes (IFC PS6) Protected Areas and Internationally Recognized Areas		
4.	IMPLICATIONS FOR THE PROJECT				
	4.1 4.2 4.3	Critical H Natural H Priority B	abitat labitat iodiversity Features	35 	
5.	CONCL	LUSION .		42	
6.	REFER		TO KEY LITERATURE	43	

## List of Tables

Table 2-1 Criteria and conditions for identifying Critical Habitats and Priority Biodiversity Features	
(EBRD, 2022)	1
Table 2-2 Alignment of EBRD PR6 and IFC PS6 criteria and thresholds for critical habitat	3
Table 2-3 Land cover/habitat mapped in the CHA study area	4
Table 3-1 Matrix used to estimate species potential occurrence based on documented habitat	
preferences and species distributions	9
Table 3-2 Screening of potential CH and PBF qualifying species for the study area	. 11
Table 3-3         PBF qualifying species in accordance with EBRD PR6	. 29
Table 3-4         Natura 2000 Sites overlapping Vifor Project area	. 34

### List of Figures

Figure 1-1: Locality Map	2
Figure 2-1: CHA Study Area	4
Figure 2-2 CHA Process Flow Chart	6

Figure 2-2 CHA & PBF Assessment Process Flow Chart for EU Member States Figure 2-3: CORINE Land cover types mapped in the study area	1 5
Figure 2-4: Map showing the extent and distribution of Natural vs Modified Habitat in the study area.	. 6
salt marshes	. 7
Figure 3-2 EAAA identified for habitat generalist species	22
Figure 3-3 EAAA identified for forest, forest-steppe, woodland specialists	24
Figure 3-4 EAAA identified for steppe, grassland and wetland in steppe habitat specialists	24
(August 2022)	26 in
Romania indicated	27
Figure 3-7: Map showing Protected Areas (PAs) and Key Biodiversity Areas (KBAs) within a 50 km radius of the Project.	34
Figure 4-1: Map showing critical habitat (degraded steppe/wetland and mixed forest EAAAs) in the CHA study area	37
Figure 4-2: Focal area map showing 1530* Pannonic salt steppes and salt marshes in the vicinity of wind turbine infrastructure planned	38
Figure 4-3: Map showing the WTGs relative to degraded 'natural' habitat	40
Figure 4-4: Map showing the WTGs relative to designated Protected Areas	41

### List of Accronyms & Abbreviations

Name	Description
Aol	Area of influence
СНА	Critical Habitat Assessment
CLC	CORINE Land Cover
CR	Critical Endangered (species threat status, according to IUCN)
DD	Data Deficient (species threat status, according to IUCN)
EAAA	Ecologically Appropriate Area of Analysis
EBRD	European Bank for Reconstruction and Development
EN	Endangered (species threat status, according to IUCN)
ERM	Environmental Resources Management Ltd.
ESIA	Environmental and Social Impact Assessment
EU	European Union
EUNIS	European Nature Information System
GN	Guidance Note
IBA	Important Bird and Biodiversity Area
IBAT	Integrated Biodiversity Assessment Tool
IFC	International Finance Corporation
IUCN	International Union for Conservation of Nature
KBA	Key Biodiversity Area
LC	Least Concern (species threat status, according to IUCN)
NG	Net Gain (of biodiversity)
NNL	No Net Loss (of biodiversity)
NT	Near Threatened (species threat status, according to IUCN)

PA	Protected Area
PBF	Priority Biodiversity Feature
PR	Performance Requirement
PS	Performance Standard
VU	Vulnerable (species threat status, according to IUCN)
WDPA	The World Database on Protected Areas
WF	Wind Farm
WTG	Wind Turbine Generator

## EXECUTIVE SUMMARY

The Critical Habitat Assessment (CHA) undertaken for the Vifor Wind Farm project considered the critical habitat qualifying criteria and thresholds of EBRD PR6 (Performance Requirement 6) GN6 (Guidance Note 6, 2022) and IFC PS6 (Performance Standard 6, 2012). The approach to the CHA was as follows:

- Screening of the biodiversity baseline data to identify any candidate Critical Habitat (CH) and/or Priority Biodiversity Features (PBF) regularly occurring in the study area. The study area encompassed the area affected by the Project's direct and indirect impacts i.e. the Area of Influence (AoI), and the surrounding landscape.
- Where candidates were identified, an Ecologically Appropriate Area of Analysis (EAAA) was defined. The EAAAs were mapped according to EBRD GN6, as supplemented with information from IFC PS6 (i.e. paragraph GN59).
- The criteria for CH / PBFs were applied to the EAAAs to determine whether each candidate qualified as such or not.
- Where CH or PBFs were confirmed present (or likely present), the implications for the Project under PR6 were then set out. This information was used to inform the Project's impact assessment process.

The following additional matters were also applied in accordance with EBRD PR6;

- PR6 paragraph 12-iii: significant biodiversity features identified by a broad set of stakeholders or governments (including in this Report legally protected and internationally / nationally recognized areas of high conservation value);
- PR6 paragraph 12-iv: ecological structure and functions needed to maintain the viability of PBFs described in this paragraph; and
- PR6 paragraph 14-v: Areas associated with key evolutionary processes.

After screening several species and running through the critical habitat qualifying criteria of EBRD PR6 and IFC PS6, it was determined that steppe habitat representative of 1530\* Pannonic salt steppes and salt marshes habitat identified in the EAAA (which is an EU Priority Habitat Types listed in Resolution 4 of the Bern Convention), qualifies this habitat type as CH for the project. Critical habitat is also triggered for several species of small mammals, herpetofauna (amphibians and reptiles) and invertebrates listed in Annex IV of the EU Habitats Directive, with associated supporting habitat for these species being the steppe (grassland/wetland) and remaining mixed forests in the study area. As a result, biodiversity Net Gain (NG) in terms of CH needs to be achieved for the project and the following is recommended:

- Review of the key threats affecting the Pannonic steppe and salt marsh habitat and faunal species for which CH has been identified to inform further mitigation options;
- The Biodiversity Impact Assessment (BIA) section of the ESIA will describe measures to avoid and minimize impacts on CH (identified as the key steppe and salt marsh habitats and several species of mammals, bats, herpetofauna, invertebrates);
- The BIA will cover embedded mitigation and measures to be implemented as part of construction and operational activities;
- Consider possible habitat management enhancements or creation to achieve net gains at the scale of the EAAA;
- Monitoring and management is to be based on pre-established targets and goals using quantified data;
- Reviews at appropriate intervals will be needed to determine the success of habitat protection and/or enhancement measures; and
- The required measures to achieve NG (for CH) and NNL (for PBF) are to be addressed within a Biodiversity Action Plan (BAP) as required in terms of EBRD PR6 and IFC PS6.

In addition to CH, several species qualify as Priority Biodiversity Features (PBFs), consisting mainly of birds listed in the EU habitats/birds directives, but also small mammals, bats and herpetofauna. For the identified PBF species, biodiversity No Net Loss (NNL) will need to be achieved, including the habitat supporting these species (i.e. primarily the steppe habitat in the study area). This is likely to require focused mitigation around the habitats supporting these species and possible habitat enhancement to compensate for any impacts resulting from the Project on steppe habitats in the Project area. It is also recommended that the BAP consider appropriate mitigation measures that may be required for PBF species.

This Project presents an interesting scenario, in that where one strictly applies the CH criteria and thresholds of IFC PS6, one would likely conclude that the EAAA does not meet the thresholds to qualify the key species (endangered *Spermophilus citellus*) as critical habitat, however the EBRD criteria automatically qualify certain species and habitats as critical habitat by virtue of their inclusion as listed species in the EU Habitats Directive. Nevertheless, discussions held with the IFC in February 2024 indicates that the IFC would apply the stricter conditions, in this case aligning with the critical habitat and PBFs identified through the application of the EBRD criteria/thresholds for CH and PBF qualification.

Another requirement will be ensuring No Net Loss (NNL) of other natural habitat in the project area, in line with the EBRD PR6 and IFC PS6 requirements, which include: avoidance of natural habitat loss/conversion or degradation, implementing mitigation measures to minimize habitat fragmentation, restoring habitats and Implementing biodiversity offsets as a last resort measure after considering all other options first.

Finally, the wind farm overlaps with identified legally protected areas, with the majority (60 of 71 turbines) being located within the Natura 2000 protected area. Therefore, the requirements in terms of paragraph 22 of EBRD Environmental and Social Policy PR6 (April 2019) apply to the Project. Paragraph 22 states that if the assessment identifies that the project has the potential to adversely impact the conservation objectives and integrity of the site, priority biodiversity features and/or critical habitat within the internationally recognised areas the client will seek to avoid such impacts. In addition, the client will need to ensure the following:

- demonstrate that the development is legally permitted, which may have entailed that a specific assessment of the project related impacts on the protected area has been carried out as required under national law;
- act in a manner consistent with any government recognised management plans for such areas;
- consult protected areas managements, relevant authorities, local communities and other stakeholders on the proposed project in accordance with EBRD PR10; and
- implement additional programmes as appropriate to promote and enhance conservation objectives of area.

## 1. INTRODUCTION

## 1.1 Background

ERM Environmental Resources Management SRL (ERM) was contracted by Low Carbon and Rezolv Energy (hereafter referred as "the Client") to conduct the Scoping Report (the report in hand) as a first step in developing the Environmental and Social Impact Assessment (ESIA) for the 446.4 MW 'Vifor' Wind Farm located in Buzau County, Romania (hereafter referred as "the Project").

According to the Romanian regulations, environmental permitting is required for the Project. Permitting of the five sub-projects was initially done in 2010-2012, with updates in 2017. The Project re-permitting has been initiated in 2021 and completed in 2023. The main construction phase is scheduled to begin in 2024.

The Client is seeking to finance the Project based on international project financing. At the current stage of development, the Project qualifies as 'Category A' according to the Environmental and Social (E&S) policies of major international finance institutions, commercial banks and export credit agencies signatory to the Equator Principles<sup>1</sup>. To access international finance, Category A projects require identification and assessment of associated E&S impacts based on an **ESIA**. ESIA outcomes are subject to public disclosure in line with the specific requirements of the international finance institution(s) to participate in the Project finance (different disclosure requirements may apply). Additionally, the establishment of a Project-specific Environmental and Social Management System (ESMS), appropriate to the nature and scale of the Project and commensurate with the level of its environmental and social risks and impacts, is considered necessary.

The Project comprises five sub-projects located within the territory of Gherăseni, Smeeni, Luciu, Țintești and Pogoanele communes, in Buzău County, and is partially located within two Natura 2000 sites. The estimated operation period of the Project is 30 to 35 years. Critical habitat is defined in terms of IFC PS6 as follows:

"Critical habitats are areas with high biodiversity value, including (i) habitat of significant importance to Critically Endangered and/or Endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes" (IFC, 2012).

The September 2022 updated guidance note from EBRD (2022) provides additional detail on the definition of critical habitat relevant to the European context (see section 2.3.1 and **Table 2-1** in *particular*).

## **1.2 Project Description**

The Project Sponsors (Low Carbon and Rezolv Energy) through First Look Solutions, intend to develop the 460.8 MW Vifor wind farm (WF) in Buzău County, Romania (**Figure 1-1**). Vifor WF is to be developed within the territory of Costești, Gherăseni, Smeeni, Luciu and Ţinteşti localities (Buzău County).

Before the Client acquired the development rights to the Project back in July 2020, Vifor wind farm comprised seven sub-projects, which have separately followed the national permitting procedures based on the latest Project design update. The sub-projects will comprise the following:

<sup>&</sup>lt;sup>1</sup> The Equator Principles is a risk management framework adopted by financial institutions, for determining, assessing and managing environmental and social risk in project finance.

- Costeşti WF with 7 wind turbines (with nominal capacity of 6.4 MW) resulting in a total capacity of 44.8 MW, located in Costeşti commune;
- Gherăseni WF with 7 wind turbines (with nominal capacity of 6.4 MW) resulting in a total capacity of 44.8 MW, located in Gherăseni commune;
- Smeeni WF with 21 wind turbines (with nominal capacity of 6.4 MW) resulting in a total capacity of 134,4 MW, located in Smeeni commune;
- Luciu WF with 30 wind turbines (with nominal capacity of 6.4 MW) resulting in a total capacity of 192 MW located in Luciu commune;
- *Ţinteşti* sub-project, consisting of 7 wind turbines (with nominal capacity of 6.4 MW) resulting in a total capacity of 44.8 MW located in *Ţinteşti* commune.

For all sub-projects, the final layout update was made using 6.4 MW EnVentus Vestas V162 WTGs, with a height to rotor of 166 m and a rotor diameter of 162 m.

Note that Pogoanele WF with 16 wind turbines was subsequently excluded from the Project based on the latest revision to the turbine layout (July 2023).



Figure 1-1: Locality Map

Source: ERM, using Client data

## **1.3 Purpose of this Document**

This report presents the Critical Habitat Assessment ("CHA") for the Vifor Wind Farm development project (the "Project") in Romania. The CHA has been prepared in support of the Project's alignment with the applicable international standards, which include those of the EBRD Guidance Note 6:

*Biodiversity Conservation and Sustainable Management of Living Natural Resources* (EBRD, September 2022).

This CHA aims to:

- Carry out an assessment of biodiversity features in accordance with topic 3.1 of EBRD PR6 (Guidance Note 6, 2022) and in alignment with IFC PS6;
- Present the implications of the CHA findings for the Project; and
- Identify the recommended next steps for the Project.

## 2. APPROACH AND METHODS

## 2.1 Delineate the Study Area and EAAAs for Key Species

A preliminary review of information on the region's ecology was carried out to define the 'Study Area' for the CHA to determine the presence of each species or ecosystem that regularly occurs in the project's 'Area of Influence' (AoI) that may qualify as critical habitat. Delineating the study area requires consideration of: (i) the likely geographic area or extent of anticipated project activities and impacts; (ii) the full extent of ecosystems that might be affected in any way; and (iii) any additional areas that have a functional role in supporting those ecosystems or their associated biodiversity.

Whilst a broader CHA study area was identified, EAAAs (Ecologically Appropriate Areas of Analysis) were also defined for key species initially screened as candidate species potentially qualifying as critical habitat in terms of criteria 1-3, or Priority Biodiversity Features (PBF) in terms of EBRD PR6. This followed the guidelines contained in IFC PS6 GN6 (IFC, 2019),

The spatial scope in this case needs to be ecologically determined and defined, encompassing wider distributions of potentially affected biodiversity features and the ecological patterns, processes, and functions that are necessary for maintaining them throughout this distribution. The study area for the CHA and EAAAs for species can therefore typically extend well beyond a Project's physical footprint and are usually anticipated to be greater than the AoI while taking into account individual species ecology. It is nevertheless permissible to have a study area that captures a number of species or to have a series of areas depending on ecosystem or ecological factors.

## 2.1.1 Study Area for Volant Species

For wind farm developments, identifying the Aol can be particularly challenging. This is because unlike other developments, the primary impacts arise from mortality or displacement of mainly volant species (e.g. bats and birds) that interact with the collision risk zone, created by the rotation of the turbine blades. In such circumstances, one way of understanding the potential Aol and delineating the study area, is to identify the suite of volant (mobile/flying) species likely to interact with the turbines. Migratory birds in particular trigger a requirement to include KBAs (Key Biodiversity Areas) and/or IBAs (Important Bird Areas) up to tens of kilometres from the project if there is a likelihood of migratory flows through the site and towards or between KBAs and IBAs. Importantly, no distinct migratory corridors were recorded in the Project area and the area is not a key site for wintering birds.

Scottish Natural Heritage (now 'NatureScot') pioneered the concept of connectivity to understand potential effects on birds in relation to normal foraging and daily movement ranges<sup>2</sup>. Similarly, bat workers have identified that many species of bats may have large foraging ranges but rely on core sustenance zones to support colonies<sup>3</sup>. Although some species have the potential to forage over long

<sup>&</sup>lt;sup>2</sup> Pendlebury, C., Zisman, S., Walls, R., Sweeney, J., McLoughlin, E., Robinson, C., & Loughrey, J. (2011) Literature review to assess bird species connectivity to Special Protection Areas: Scottish Natural Heritage Commissioned Report No. 390.

<sup>&</sup>lt;sup>3</sup> Collins, J. (Ed.). (2016) Bat surveys for professional ecologists: good practice guidelines. Bat Conservation Trust.

distances, most will rarely travel beyond 10km on a daily basis<sup>4</sup>, becoming progressively more dispersed over the landscape where they do travel such distances. **For volant species, a study area of a 10km buffer around the Project's concession area** provides a reasonable ecological basis for analysis.

The study area (approximately 52,183 hectares in extent) is presented on the map in Figure 2-1.

## 2.1.2 Study Area for Non-Volant Species

For non-volant species (e.g. land-based fauna), given the highly developed landscape with limited natural habitat, poor connectivity and limited continuity, a separate AoI and study area for non-volant (non-flying) species could not be readily determined. Instead, the broader 10 km buffer for the volant species study area was used, considering the location of the Natura 2000 protected area and habitt connectivity continuity within this area as shown in Figure 2-1. Individual EAAAs for non-volant species were also considered where candidate species screened for the assessment were assessed further (presented later in the report).





Source: ERM, using Client data

## 2.2 Review and verification of available information

A desk-based review of available information on the biodiversity features within the study area was undertaken to inform the CHA. This included a review of global biodiversity datasets, project-specific biodiversity information, and published and publicly available information (as needed).

<sup>&</sup>lt;sup>4</sup> Some examples of distances that volant species tend to travel can be found in the following document: Scottish Natural Heritage. (2016) Assessing Connectivity with Special Protection Areas (SPAs).

A list of biodiversity features [(i.e. species, Key Biodiversity Areas (KBAs), and Protected Areas (PAs)], potentially present in the study area was compiled from a spatial analysis of global datasets available through the Integrated Biodiversity Assessment Tool (IBAT). IBAT is a tool that draws from the IUCN (International Union for Conservation of Nature) Red List of Threatened Species, KBAs, and The World Database on Protected Areas.

Project biodiversity information was also reviewed to support the identification of biodiversity that may qualify the area as critical habitat and natural habitat and was particularly important for confirming species presence in the study area. This included the following sources of information:

- Appropriate Assessment (2012);
- Scoping Report (ERM January, 2023);
- Biodiversity Baseline Study (ERM, May 2023);
- ESIA Study for Vifor Wind Farm, Romania 1 (August, 2022);
- ESIA Study for Vifor Wind Farm, Romania 2 (November, 2022);
- ESIA Study for Vifor Wind Farm, Romania 3 (January, 2023);
- Natura 2000 viewer and standard data forms.

## 2.3 Assess biodiversity values against EBRD & IFC Critical Habitat criteria

## 2.3.1 Apply Critical Habitat criteria and thresholds

The CHA methodology followed EBRD Guidance Note 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources (EBRD, September 2022). The steps of the assessment were:

- Screening of the biodiversity baseline data to identify any candidate Critical Habitat (CH) and/or Priority Biodiversity Features (PBF) regularly occurring in the study area. The study area encompassed the area affected by the Project's direct and indirect impacts i.e. the Area of Influence, and the surrounding landscape.
- 2. Where candidates were identified, an Ecologically Appropriate Area of Analysis (EAAA) was defined. The EAAAs were mapped according to EBRD GN6, as supplemented with information from the International Finance Corporation's (IFC) GN6 (i.e. paragraph GN59).
- 3. The criteria for CH and Priority PBFs were applied to the EAAAs to determine whether each candidate qualified as such or not.
- 4. Where CH and/or PBFs were confirmed present (or likely present), the implications for the Project under PR6 were then set out. This information was used to inform the Project's impact assessment process.

A summary of the methodology is presented in the following sub-sections and shown graphically in **Figure 2-2-2** below (and in **Figure 2-3** for the EBRD PR6 CHA process for <u>EU member states</u>).



## Figure 2-2 CHA Process Flow Chart

Source: EBRD 'Guidance Note 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources' (September 2022)

## Figure 2-3 CHA & PBF Assessment Process Flow Chart for EU Member States



Source: EBRD 'Guidance Note 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources' (September 2022)

**Error! Reference source not found.** presents the EBRD PR6 criteria used to identify Priority Biodiversity Features (PBF) and Critical Habitat (CH). The following additional matters were also applied in accordance with PR6, which are not listed in Table 2-1, i.e:

- PR6 paragraph 12-iii: significant biodiversity features identified by a broad set of stakeholders or governments (including in this Report legally protected and internationally / nationally recognized areas of high conservation value);
- PR6 paragraph 12-iv: ecological structure and functions needed to maintain the viability of PBFs described in this paragraph; and
- PR6 paragraph 14-v: Areas associated with key evolutionary processes.

Where applicable to the Project, these additional matters were determined as PBFs or CH using professional judgement.

As Romania is a member of the EU and therefore a signatory to the Bern Convention on the 'Conservation of European Wildlife and Natural Habitats', habitats or species listed in the Bern Convention (Resolutions 4<sup>5</sup> and Resolution 6<sup>6</sup>, respectively) qualified automatically as PBFs or CH, as appropriate based on the relevant EBRD PR6 CH qualifying criteria.

For remaining Priority Ecosystems and Priority Species, an Ecologically Appropriate Area of Analysis (EAAA) was defined and that EAAA unit evaluated against the conditions for CH (**Table 2-1**). The EAAAs were identified according to the EBRD GN6 supplemented with information from the International Finance Corporation's (IFC) Guidance Note 6. The EAAA approach to the analysis was not adopted for features which did not qualify as a PBFs or CH at this step were not taken further in the assessment.

Criterion		Priority Biodiversity Feature C		Cri	ritical Habitat	
1.	Priority ecosystems					
Th	reatened ecosystems					
(a)	<ul> <li>Habitats listed in Annex 1 of EU Habitats Directive (EU members only) or Resolution 4 of Bern Convention (signatory nations only)</li> </ul>		EAAA is habitat type listed in Annex 1 of EU Habitats Directive or Resolution 4 of Bern Convention	(a)	EAAA is habitat type listed in Annex 1 of EU Habitats Directive marked as "priority habitat type" (EU members only)	
(b)	<ul> <li>IUCN Red-List EN or CR ecosystems</li> </ul>		EAAA < 5% of the global extent of an ecosystem type with IUCN status of CR or EN	(b)	EAAA ≥5% of global extent of an ecosystem type with IUCN status of CR or EN	
				(c)	EAAA is ecosystem determined to be of high priority for conservation by national systematic conservation planning	
2.	Priority Species and their Ha	abita	ts			
Th	reatened Species					
(a)	Species and their habitats listed in EU Habitats Directive and Birds Directive (EU members only) or Bern Convention	(a)	EAAA for species and their habitats listed in Annex II of Habitats Directive, Annex I of Birds Directive, or Resolution 6 of	(a)	EAAA for species and their habitats listed in Annex IV of the Habitats Directive (see EU restrictions)	
(b)	(signatory nations only)		Bern Convention	(b)	EAAA supports $\geq$ 0.5% of the global population AND $\geq$ 5 reproductive units of a CR or EN	
	species				sheries	

## Table 2-1 Criteria and conditions for identifying Critical Habitats and Priority Biodiversity Features (EBRD, 2022)

<sup>&</sup>lt;sup>5</sup> Resolution No. 4 (of 1996) listing endangered natural habitats requiring specific conservation measures.

<sup>&</sup>lt;sup>6</sup> Resolution No. 6 (of 1998) listing the species requiring specific habitat conservation measures (revised list adopted in 2011).

Criterion	Priority Biodiversity Feature	Critical Habitat
<ul> <li>(c) IUCN Red List VU species</li> <li>(d) Nationally or regionally (e.g., Europe) listed EN or CR species</li> </ul>	<ul> <li>(b) EAAA supports &lt; 0.5% of global population OR &lt; 5 reproductive units of a CR or EN species.</li> <li>(c) EAAA supports VU species</li> <li>(d) EAAA for regularly occurring</li> </ul>	(c) EAAA supports globally significant population of VU species necessary to prevent a change of IUCN Red List status to EN or CR, and satisfies threshold (b)
	nationally or regionally listed EN or CR species	(d) EAAA for important concentrations of a nationally or regionally listed EN or CR species
Range-restricted species		
	<ul> <li>EAAA for regularly occurring range-restricted species</li> </ul>	<ul> <li>(a) EAAA regularly holds ≥ 10% of global population AND ≥ 10 reproductive units of the species***</li> </ul>
Migratory and congregatory spe	cies	
	<ul> <li>EAAA identified per Birds Directive or recognized national or international process as important for migratory birds (esp. wetlands)</li> </ul>	<ul> <li>(a) EAAA sustains, on a cyclical or otherwise regular basis, ≥ 1 percent of the global population at any point of the species' lifecycle</li> </ul>
		<ul> <li>(b) EAAA predictably supports         ≥10 percent of global         population during periods of         environmental stress</li> </ul>

\*\*\* The IUCN Key Biodiversity Areas standard cites the following definition for reproductive unit: *"the minimum number and combination of mature individuals necessary to trigger a successful reproductive event at a site"*. Examples of five reproductive units include five pairs, five reproducing females in one harem, and five reproductive individuals of a plant species.

Since the CHA also considered the CHA criteria and guidance provided in IFC PS6, a comparison of the EBRD PR6 and IFC PS6 critical habitat qualifying criteria and thresholds has been provided in **Table 2-2** to indicate alignment between the two standards.

## Table 2-2 Alignment of EBRD PR6 and IFC PS6 criteria and thresholds for critical habitat

Critical Habitat Qualifying Criteria and Th	Commonto	
EBRD PR6	IFC PS6	Comments
<ul> <li>1 Threatened ecosystems:</li> <li>EAAA is habitat type listed in Annex 1 of EU Habitats Directive marked as "priority habitat type"</li> <li>EAAA ≥5% of global extent of an ecosystem type with IUCN status of CR or EN</li> <li>EAAA is ecosystem determined to be of high priority for conservation by national systematic conservation planning</li> </ul>	<ul> <li>Criterion 4: Highly threatened and/or unique ecosystems<sup>7</sup>:</li> <li>Areas representing ≥ 5 % of the global extent of an ecosystem type meeting the criteria for IUCN status of CR or EN</li> <li>Other areas, not yet assessed by IUCN, but determined to be of high priority for conservation by regional or national systematic conservation planning</li> </ul>	Well aligned, EBRD PR6 includes also EU habitat directive priority habitat types
<ul> <li>2 Threatened species:</li> <li>EAAA for species and their habitats listed in Annex IV of the Habitats Directive (EU members only)</li> <li>EAAA supports ≥ 0.5% of the global population AND ≥ 5 reproductive units of a CR or EN species</li> <li>EAAA supports globally significant population of VU species necessary to prevent a change of IUCN Red List status to EN or CR</li> <li>EAAA for important concentrations of a nationally or regionally listed EN or CR species</li> </ul>	<ul> <li>Criterion 1: Habitat of significant importance to Critically Endangered (CR) and/or Endangered (EN) species: <ul> <li>Areas that support globally-important concentrations of an IUCN Red-listed EN or CR species (0.5 % of the global population AND 5 reproductive units of a CR or EN species)</li> <li>Areas that support globally-important concentrations of an IUCN Red-listed VU species, the loss of which would result in the change of the IUCN Red List status to EN or CR</li> <li>As appropriate, areas containing nationally/regionally-important concentrations of an IUCN Red-listed EN or CR species</li> </ul> </li> </ul>	Mostly aligned (EBRD criteria also include species protected under the EU Habitat/Species Directives which IFC PS6 does not address)
<ul> <li>3 Restricted-range species:</li> <li>EAAA regularly holds ≥ 10% of global population AND ≥ 10 reproductive units of the species</li> </ul>	Criterion 2: Habitat of significant importance to endemic <sup>8</sup> and/or restricted- range species: • Areas that regularly hold ≥ 10 % of the global population size AND ≥ 10 reproductive units of a species	Fully aligned
<ul> <li>4 Migratory and congregatory species:</li> <li>EAAA sustains, on a cyclical or otherwise regular basis, ≥ 1 percent of the global population at any point of the species' lifecycle</li> <li>EAAA predictably supports ≥10 percent of global population during periods of environmental stress</li> </ul>	Criterion 3: Habitat supporting globally significant concentrations of migratory <sup>9</sup> species and/or congregatory <sup>10</sup> species: • Areas known to sustain, on a cyclical or otherwise regular basis, ≥ 1 % of the global population of a migratory or congregatory species at any point of the species' lifecycle • Areas that predictably support ≥ 10 % of the global population of a species during periods of environmental stress Criterion 5: Areas associated with key	Fully aligned
n/a	evolutionary processes <sup>11</sup>	Not aligned

7 Unique ecosystems encompass those natural systems and environments that are considered to be rare or one-of-a-kind and therefore not widely represented (depending on what scale these are assessed) and therefore may be considered to be of

## 2.4 Undertake field surveys to verify potential high priority species

Baseline field surveys were used to verify the presence, distribution and/or abundance of the potential high priority species that were initially screened based on desk-based information, expert consultation and opinion, and professional knowledge. These field surveys were designed to target the potential high priority species in order to validate findings from desk-based analysis and identify any additional biodiversity features likely to qualify areas as critical habitat. Further details of the baseline survey methodology and findings are detailed in the 'Biodiversity Monitoring' prepared by ERM (2023).

## 2.5 Identify Natural Habitat and Modified Habitat

Mapping of habitats was undertaken in a GIS (Geographical Information System, QGIS) using global land cover and the latest available Google Earth<sup>™</sup> satellite imagery, with field investigations to identify the distribution of land cover types within the study area. This produced a land cover/habitat map with 18 cover categories<sup>12</sup> (see **Table 2-3** and the map in **Figure 2-3**).

No.	CORINE Land Cover Classification	CLC Cod e	Description	Class	Extent (ha)	Extent (km²)	Cover
1	Arable land	2.1	Agricultural land under active cultivation for crops.	Modified (artificial)	29, 873	299	57%
2	Urban fabric	1.1	Developed areas with built infrastructure (generally residential and roads).	Modified (artificial)	6, 595	66	13%
3	Mixed Forest	3.1.3	Dense wooded habitat that is likely closed- canopy mixed forest or slightly more open woodland.	Natural	2, 222	22	4%
4	Natural grasslands / steppe	3.2.1 / 3.2.4	Open grassland areas, steppe habitat or sparse/transitional woodland.	Natural (but heavily degraded*)	13, 493	135	26%
Totals					52, 183 ha	522 km <sup>2</sup>	100 %

## Table 2-3 Land cover/habitat mapped in the CHA study area

\* Note that since no universal thresholds exist for classifying a habitat as natural habitat or modified habitat, expert analysis was relied on to assign the derived land cover categories from the mapping exercise described above as natural or modified habitat. During initial site visits, it was determined that the grasslands and steppes

inherently great conservation importance and high irreplaceability value. What makes an ecosystem unique is somewhat open to interpretation, but typically requires a multi-faceted assessment of several supporting criteria (IFC, 2019).

<sup>8</sup> In terms of IFC PS6 GN6 (2019), the term 'endemic' is defined as restricted-range, which refers to a limited extent of occurrence (EOO) for a particular species. For terrestrial vertebrates and plants, restricted-range species are defined as those species that have an EOO less than 50,000 km2 (IFC, 2019).

<sup>9</sup> Migratory species are defined as any species of which a significant proportion of its members cyclically and predictably move from one geographical area to another (including within the same ecosystem) (IFC, 2019).

<sup>10</sup> Congregatory species are defined as species whose individuals gather in large groups on a cyclical or otherwise regular and/or predictable basis (IFC, 2019).

<sup>11</sup> Key evolutionary processes that give rise to regional configurations of species and ecological properties can be influenced by the structural attributes of a region, such as its topography, geology, soil, temperature, and vegetation, and combinations of these variables (IFC, 2019).

<sup>12</sup> The levels 1, 2 CORINE Land Cover (CLC) classification system was used. This is available online at: (https://land.copernicus.eu/eagle/files/eagle-related-projects/pt\_clc-conversion-to-fao-lccs3\_dec2010

had been significantly degraded as a result of overgrazing, such that these no longer represent the natural botanical and faunal compositions of the reference type. Most habitats of the Project area were shown to be lacking vitality as the soil is very dry (due to drought), but also because of continuous intensive grazing (even during winter, with no rest period for vegetation to recover) with an increased number of animals exceeding the carrying capacity of the pasturelands. Thus, the maximum height of vegetation is extremely low (<5 cm). Indeed, halophilous grasslands were so degraded that it was impossible to distinguish the habitat type. Whilst these areas have been classified as 'natural' as part of the CHA (given that there are still pockets of land that could be considered in natural state and these have not been ploughed and re-seeded) their degraded state is emphasised here.



## Figure 2-4: CORINE Land cover types mapped in the study area

The proportion of modified (artificial) habitat equates to an estimated 70% of the study area, with semi-natural steppe and forest/woodland comprising around 30% of the study area (see map in **Figure 2-4**).

## Figure 2-5: Map showing the extent and distribution of Natural vs Modified Habitat in the study area



## 3. FINDINGS OF THE CRITICAL HABITAT ASSESSMENT

## 3.1 Criterion 1: Priority Ecosystems

Criterion 1 considers the presence of 'priority ecosystems' (i.e. threatened ecosystems) and this includes ecosystems that are listed as CR or EN as per the IUCN threatened ecosystems listing, as well as habitats listed in Annex 1 of the EU Habitat directive.

Considering the criteria and thresholds in **Table 2-1**, the EAAA comprises natural habitat that includes *open grassland areas, steppe habitat or sparse/transitional woodland*. Portions of the EAAA and study area include the Natura 2000 protected area: ROSCI0259 Valea Călmățuiului (SCI: Site of Community Importance) which is designated in terms of the EU Habitats Directive and comprises EU priority habitat types, that are **1530\* Pannonic salt steppes and salt marshes** (*see Information Box 1*).

During the first habitat survey conducted in 2010, the EU priority habitat type: '1530\* Pannonic salt steppes and salt marshes' was identified in proximity of the project area (1.5km) in Luciu commune. The results presented in the Baseline Biodiversity Reports from 2022, indicates that the natural habitats in the Project area are considered relatively diverse but the major EUNIS habitat types are: R622 Ponto-Sarmatic salt steppes and saltmarshes which covers a total area of 1507.29 ha, followed by V1 Arable land and market gardens with 1179.86 and V34 Trampled xeric grasslands with annuals with an area of 627.89 ha.

Habitats R622 Ponto-Sarmatic salt steppes and saltmarshes, R6221 Western Pontic saline steppes, R62212 Western Pontic Artemisia-Festuca steppes and R6227 Sarmatic saline meadows correspond to Annex 1 priority habitat 1530\* Pannonic salt steppes and salt marshes listed in the

Habitat Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora). The map in **Figure 3-1** presents the location of EU priority habitat 1530\* in relation to project layout.

Most of the priority habitat identified is in poor condition due to drought, continuous intensive grazing with unstainable stocking densities. Thus, the maximum height of vegetation is extremely low (<5 cm), and some plant species are adopting different reproductive strategy such as vegetative propagation. In response to the findings on habitat 1530\*, detailed surveys were conducted for Annex 1 priority habitat 1530\*, which is strictly protected under the EU habitats directive.

## Figure 3-1: Map showing the location and extent of priority habitat 1530\* Pannonic salt steppes and salt marshes



Source: ERM (2023).

Despite their degraded status, the steppic habitats in the study area are considered representative of EU priority habitat type: **1530\* Pannonic salt steppes and salt marshes.** In terms of the EBRD PR6 critical habitat criteria, this qualifies the steppic habitats in **Figure 3-1** automatically as both CH in terms of criterion 1(a) and as a PBF in terms of EBRD PR6 critical habitat criterion 1(a) (*see Table 2-1*). Note that no thresholds are given in terms of EBRD PR6 for EU priority habitat types which automatically qualify the associated EAAAs as critical habitat.

#### Information Box 1. Pannonic salt steppes and salt marshes

#### **Classification and Status:**

- Classified in terms of EUNIS: E6.21 Pannonic salt steppes and saltmarshes.
- Conservation status: poor (a habitat is in a situation where a change in management or policy is required to return the habitat to favourable status but there is no danger of disappearance in the foreseeable future).
- Vulnerable (VU) threat status according to the EU Red List of Habitats (European Union, 2016).
- EU Habitats Directive: code 1530, Annex I classified as priority habitat in terms of revised Annex I to Resolution 4 of the Bern Convention on endangered natural habitat types using the EUNIS habitat classification: listing of endangered natural habitats requiring specific conservation measures.

#### **Description:**

In Romania, salt steppes occur in the Pannonian and Western Pontic areas, with a great variety of plant communities. Salt steppes, salt pans, saltmarshes and shallow salt lakes, which are highly influenced by pannonic climate with extreme temperatures and aridity in summer. The enrichment of salt in the soil is due to high evaporation of ground water during summer months. These habitat types are partly of natural origin and partly under distinct influence of cattle grazing. The halophytic vegetation (salt tolerant) consists of plant communities on dry saltpans and steppes, humid salt meadows and annual plant communities of periodically flooded salt lakes. The vegetation pattern is closely related to the relief determined by salt content, salt quality, and the depth of soil layer with higher salt concentration. The mosaic-like structure of different habitats supports an exceptionally rich fauna and flora, with several endemic species. Most of the salt steppes in the region represent semi-natural habitats where biological diversity is maintained in conjunction with human activities. The indigenous animal species play an important ecological role in the conservation of the salt steppes and salt marshes habitats. When grazing on the appropriate habitat types, they provide optimal maintenance of the vegetation, and thus contribute to the recovery of habitats.

#### Typical plant species composition:

The vegetation composition of salt steppes and salt marshes is determined by two main factors: water and the amount of salt in the soil and water. Changes in salt concentrations in the soil can lead to the disappearance or even the extinction of certain plant species. Typical species include: Artemisia santonicum, Suaeda corniculata, S. pannonica, Lepidium crassifolium, Puccinellia peisonis, Aster tripolium, Salicornia prostata, Camphorosma annua, Plantago tenuiflora, Juncus gerardii, Plantago maritima, Cyperus pannonicus, Pholiurus pannonicus, Festuca pseudovina, Achilea collina, Artemisia pontica, Puccinellia limosa, Scorzonera cana, Petrosimonia triandra, Peucedanum officinale, Halocnemum strobilaceum, Frankenia hirsuta, Aeluropus littoralis, Limonium meyeri, Limonium gmelini, Nitraria shoberi, Carex distans, C. divisa, Taraxacum bessarabicum, Beckmannia eruciformis, Zingeria pisidica, Trifolium fragiferum, Cynodon dactylon, Ranunculus sardous, Agropyron elongatum, Halimione verrucifera (syn Obione verrucifera). Lepidium latifolium, Leuzea altaica (syn L. salina), Iris halofila, Triglochin maritima, Hordeum hystrix, Aster sedifolius. Scorzonera austriaca var. mucronata, Kochia laniflora, Festuca arundinacea ssp. Orientalis.

#### Key threats:

- Agriculture: many Pannonic salt steppes and salt marshes were totally destroyed for agricultural purposes. Ploughing for agriculture is still a major threat.
- Eutrophication and lack of management as well as by water management lowering of water table connected with river regulations and building of canals have very negative impact on those ecosystems.
- Grasslands are relatively fragile and can only stand extensive grazing.

#### Sources of information:

- European Commission (2013). Natura 2000: Interpretation Manual of European Union Habitats. April 2013.
- European Union (2016). European Red List of habitats. Part 2. Terrestrial and freshwater habitats. ISBN 978-92-79-61588-7. doi: 10.2779/091372
- Šefferova Stanova V., Janak M. & Ripka J. (2008). Management of Natura 2000 habitats. 1530
   \*Pannonic salt steppes and salt marshes. European Commission. Available online at: https://ec.europa.eu/environment/nature/natura2000/management/habitats/pdf/1530\_Pannonic\_salt \_steppes.pdf
- EUNIS habitat information sheet: E6.21 Pannonic salt steppes and saltmarshes. Online at: https://eunis.eea.europa.eu/habitats/10029

## 3.2 Criterion 2: Threatened Species & their habitats

## 3.2.1 Critical Habitat Qualifying Species

Criterion 2 deals primarily with species that are of conservation importance or concern (i.e. threatened species with CR/EN/VU threat status, species included in specific annexes of the EU Habitats/Species Directives), the presence of which may typically qualify habitats as 'critical habitat'.

Initially, species potential occurrence (or likelihood of occurrence) was assessed at a desktop level based on available information and supplemented by the findings of the biodiversity baseline assessment (refer to the relevant chapter of the supplementary ESIA). The habitat requirements/preferences for each plant/animal species of conservation concern were reviewed (based on the available literature) and was then compared against the known species distributions and habitat types documented for the study area in order to estimate the potential occurrence of each priority species identified, using the matrix below in Error! Reference source not found.

		SPECIES HABITA	T REQUIREMENTS / F	PREFERENCES
		Fully met	Largely met	Not met / Unsuitable
TRI-	Habitat occurs within documented species geographical/altitudinal range	Highly likely	Likely	Unlikely
SILES DIS	Habitat occurs on the edge of documented species geographical/altitudinal range	Possible	Possible	Unlikely
SPEG	Habitat occurs outside of documented species geographical/altitudinal range	Unlikely	Unlikely	Highly unlikely or Improbable

## Table 3-1 Matrix used to estimate species potential occurrence based on documented habitat preferences and species distributions

**Table 3-2** provides a summary of the screening undertaken initially to identify possible candidatecritical habitat-qualifying and PBF species of fauna, which includes a combined a candidate speciesthat potentially qualify the study area as critical habitat and which were considered in the assessment.

The Project area partially overlaps with the Natura 2000 sites ROSCI0259 Valea Călmăţuiului (Site of Community Importance/SCI) and ROSPA0145 Valea Călmăţuiului (Special Protection Area/SPA). Whilst the Standard Data Forms (SDFs) for ROSCI0259 Valea Călmăţuiului (Site of Community Importance/SCI) and ROSPA0145 Valea Călmăţuiului do list several species of conservation importance, the numbers listed and those observed during field surveys do not suggest that these meet the requirements for critical habitat qualifying thresholds in terms of criterion 2 (*unless they are listed in Annex IV of the EU Habitats Directive, in which case these qualify automatically as CH in terms of EBRD's PR requirements*).

Note that several species of conservation concern (i.e. threatened species, endemic species, restricted-range species, migratory species) were screened out or excluded from the desktopbased assessment based on the findings of the desktop likelihood of occurrence assessment for one or more reasons such as:

- Lack of suitable supporting habitat in the CHA study area;
- Known or modelled geographical range is outside of the CHA study area; or
- IUCN data indicates species are likely to be extinct from the region.

The biodiversity baseline data collected for the study area (field-based observations) were ultimately used to determine specie presence or absence from the CHA study area, and used to screen-out species that were not observed in the area.

In summary, the following candidate species, confirmed for the study area through baseline surveys, potentially qualify the CHA study area as critical habitat and were subject to further assessment:

#### Globally CR/EN species

- Mammals
  - Spermophilus citellus

#### Nationally CR/EN species (Romania)

- Birds

-

- Circus macrourus
- Circus pygargus
- Corvus corax
- Egretta garzetta
- Falco peregrinus
- Milvus migrans
- Tadorna ferruginea

#### Species listed in Annex IV of the EU Habitats Directive

- All species of bats
  - Barbastella barbastellus
  - Eptesicus serotinus
  - Hypsugo savii
  - Myotis daubentoniid
  - Nyctalus lasiopterus
  - Nyctalus leisleri
  - Nyctalus noctule
  - Pipistrellus nathusii/kuhlii
  - Pipistrellus pipistrellus
  - Pipistrellus pygmaeus
  - Plecotus auratus
  - Plecotus austriacus
  - Vespertilio murinus
- Mammals
  - Spermophilus citellus
- Amphibians & reptiles
  - Bombina bombina
  - Hyla orientalis (Hyla arborea)
  - Bufo viridis
  - Emys orbicularis
- Invertebrates (insects)
  - Zerynthya polyxena

			-	-			•			
S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?	
					Birds					
1	Saker falcon	Falco cherrug	EN	Possible occurrence but not confirmed through field surveys	Globally CR/EN species	Revised Annex I of Resolution 6	Open grassy landscapes such as desert edge, semi-desert, steppes, agricultural and arid montane areas.	Yes	$\otimes$	
2	Peregrine Falcon	Falco peregrinus					Inhabits an extreme variety of habitats.	Yes	$\bigotimes$	
3	White-tailed sea-eagle	Haliaeetus albicilla	_				Requires large and open expanses of lake, coast or river valley, within the boreal, temperate and tundra zones, nearby to undisturbed cliffs or open stands of large, old-growth trees for nesting.	No	$\otimes$	
4	Black-winged stilt	Himantopus himantopus	LC				Outside of the breeding season the species occupies the shores of large inland waterbodies and estuarine or coastal habitats.	No	$\otimes$	
5	Pallid harrier	Circus macrourus		LC	Confirmed	Nationally CR/EN species (Romania RDL)	Annex I of Birds Directive	Nesting sites are wet grasslands close to small rivers and lakes, and marshlands. has also been found to breed in agricultural areas, at least when agriculture is non-intensive.	Yes	$\bigotimes$
6	Montagu's harrier	Circus pygargus					A bird of open country, usually in lowlands.	Yes	$\bigotimes$	
7	Common raven	Corvus corax					A habitat generalist, breeding throughout forested and open coastal, steppe, mountain, tundra and cliff region.	Yes	$\bigotimes$	
8	Little egret	Egretta garzetta					Fresh, brackish or saline wetlands. Habitats frequented include the margins of shallow lakes, rivers,	Yes	$\bigotimes$	

## Table 3-2 Screening of potential CH and PBF qualifying species for the study area

S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?
							streams and pools, open swamps and marshes, flooded meadows.		
9	Black kite	Milvus migrans	_				Found ubiquitously throughout habitats, although avoiding dense woodland.	Yes	$\bigotimes$
10	Ruddy shelduck	Tadorna ferruginea					Frequents the shores of inland freshwater, saline and brackish lakes and rivers in open country, particularly those in open steppe, upland plateau and mountainous regions.	No	$\otimes$
11	Eurasian curlew	Numenius arquata	NT	-			Upland moors, peat bogs, swampy and dry heathlands, fens, open grassy or boggy areas in forests, damp grasslands, meadows.	No	$\otimes$
12	Merlin	Falco columbarius	LC (Europe: VU)			Anney Lof Birds	Wide range: forest, grassland, shrubland, wetlands.	Yes	$\bigotimes$
13	Rook	Corvus frugilegus	LC (Europe: VU)		n/a	Directive	Prefers agricultural land, wooded steppe and riverine plains with fragmented woodland or stands of trees.	Yes	$\bigotimes$
14	Northern Iapwing	Vanellus vanellus	NT (Europe: VU)				Shows a preference for breeding on wet natural grasslands, meadows and hay meadow.	Yes	$\bigotimes$
15	Red-footed falcon	Falco vespertinus	VU		n/a	Annex I of Birds Directive	Steppe and forest-steppe, open woodland, cultivation and pastureland with tall hedgerows or fringing trees, agricultural areas with shelterbelts.	Yes	$\bigotimes$
16	European Turtle-dove	Streptopelia turtur	-			VU Species	Wide variety of woodland types, as well as steppe and semi-desert, frequently relying on agricultural land for feeding.	Yes	$\bigotimes$

S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?
17	Ruff	Philomachus pugnax	LC (Europe: NT)				Inhabits tundra habitats from the coast to the Arctic treeline. Fully migratory and travels on a broad front across Europe.	No	$\otimes$
18	Levant Sparrowhawk	Accipiter brevipes		-			Deciduous forests, often near water, including plantations, orchards and vineyards.	Yes	$\bigotimes$
19	Tawny pipit	Anthus campestris					Open dry habitats, from sand dunes, sandy heaths, dry grassland and clear-felled areas to artificial habitats such as gravel pits, steppe and semi-deserts.	Yes	$\bigotimes$
20	Booted eagle	Aquila pennata (Hieraaetus pennatus)	_				Open woodland, preferring patches of forest interspersed with open areas.	Yes	$\bigotimes$
21	Lesser Spotted Eagle	Aquila pomarina	-			Annex I of Birds Directive	Breeds near forest edges, preferring moist woodland; most nest in lowlands.	Yes	$\bigotimes$
22	Great White Egret	Ardea alba	LC			2	Inhabits all kinds of inland and coastal wetlands.	No	$\otimes$
23	Purple heron	Ardea purpurea	_				Preference for dense, flooded, freshwater reedbeds in temperate areas.	No	$\otimes$
24	Eurasian thick- knee	Burhinus oedicnemus	_				Inhabits lowland heath, semi-natural dry grassland, infertile agricultural grassland, steppe on poor soil, desert and extensive sand-dunes.	Yes	$\bigotimes$
25	Long-legged buzzard	Buteo rufinus	-				Open areas, particularly steppe and semi-desert.	Yes	$\bigotimes$
26	White stork	Ciconia ciconia	-				Open areas, generally avoiding regions with persistent cold, wet weather or large tracts of tall, dense vegetation such as reedbeds or forests.	Yes	$\bigotimes$

www.erm.com Version: 0.1 draft (rev3)

S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?
27	Black stork	Ciconia nigra					Inhabits old, undisturbed, open forests.	No	$\otimes$
28	Short-toed snake-eagle	Circaetus gallicus	-				Variety of habitats.	Yes	$\bigotimes$
29	Western Marsh-harrier	Circus aeruginosus					Inhabits extensive areas of dense marsh vegetation, in fresh or brackish water, generally in lowlands.	No	$\otimes$
30	Hen harrier	Circus cyaneus					Forest, shrubland, grassland, wetland.	Yes	$\bigotimes$
31	Eleonora's Falcon	Falco eleonorae					Breed and stop over on small islands and islets, wintering mainly in open woodland.	No	$\otimes$
32	Black-crowned Night-heron	Nycticorax nycticorax					Inhabits fresh, brackish or saline waters with aquatic vegetation and bamboo or trees.	No	$\otimes$
33	Collared pratincole	Glareola pratincola					Fields, steppe plains near water.	Yes	$\bigotimes$
34	Common crane	Grus grus	_				Utilises a wide variety of shallow wetlands, including high altitude, treeless moors or bogs.	No	$\otimes$
35	Red-backed shrike	Lanius collurio					Dry, and level or gently sloping terrain, with scattered bushes, shrubs or low trees providing hunting posts overlooking areas of short grass, heath or bare soil.	Yes	$\bigotimes$
36	Lesser Grey Shrike	Lanius minor					Open habitat with plenty of scattered or grouped trees and fewer bushes.	Yes	$\bigotimes$
37	Calandra lark	Melanocorypha calandra					Open plains, from steppes and pastures to extensive dry cereal	Yes	$\bigotimes$

#### FINDINGS OF THE CRITICAL HABITAT ASSESSMENT

41       Glossy ibis       Plegadis falcine/lus         42       Eurasian golden plover       Plegadis apricaria         42       Eurasian golden plover       Pleyadis apricaria         42       Eurasian golden plover       Pleyadis apricaria         43       Breeds on humid moss, lichen and humid subturding dense stands of emergent vegetation.       No	S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?
38       Great white pelican       Pelearus onocrotalus       No         39       European honey-buzzard       Pernis apivorus       Forest species, typically breeding in lowland or mid altitude undisturbed temperate or boreal woodland.       Yes         40       Eurasian spoonbill       Platalea leucorodia       Platalea leucorodia       No       No         41       Glossy ibis       Plegadis falcinellus       Plegadis falcinellus       No       No         42       Eurasian golden plover       Pluvialis apricaria       No       No       No								cultivations and true steppe with dense grass cover.		
39       European honey-buzzard       Pernis apivorus         40       Eurasian spoonbill       Platalea leucorodia       Yes         40       Eurasian spoonbill       Platalea leucorodia       No         41       Glossy ibis       Plegadis falcinellus       No         42       Eurasian golden plover       Pluvialis apricaria       No         42       Eurasian golden plover       Pluvialis apricaria       No	38	Great white pelican	Pelecanus onocrotalus					Relatively large, warm, shallow fresh, brackish, alkaline or saline lakes, lagoons.	No	$\otimes$
40       Eurasian spoonbill       Platalea lea leucorodia       No       Inhabits either fresh, brackish or saline marshes, rivers, lakes, flooded areas and mangrove swamps, especially those with islands for nesting or dense mergent vegetation (e.g. reedbeds) and scattered trees or shrubs.       No         41       Glossy ibis       Plegadis falcinellus       Feeds in very shallow water and nests in freshwater or brackish or emergent vegetation.       No         42       Eurasian golden plover       Pluvialis apricaria       No       No	39	European honey-buzzard	Pernis apivorus					Forest species, typically breeding in lowland or mid altitude undisturbed temperate or boreal woodland.	Yes	$\bigotimes$
41Glossy ibisPlegadis falcinellusNo42Eurasian golden ploverPluvialis apricariaNo	40	Eurasian spoonbill	Platalea leucorodia					Inhabits either fresh, brackish or saline marshes, rivers, lakes, flooded areas and mangrove swamps, especially those with islands for nesting or dense emergent vegetation (e.g. reedbeds) and scattered trees or shrubs.	No	$\otimes$
42       Eurasian golden plover       Pluvialis apricaria         Breeds on humid moss, lichen and hummock tundra, low-lying marshes in moss tundra, shrub tundra, open bogs in forest, peatlands, alpine tundra, highland bogs , moors, and swampy highland heatshs with high abundances of sphagnum moss and heather When on passage and in its winter quarters (the species frequents freshwater wetlands, moist grasslands, pastures, articultural land       No	41	Glossy ibis	Plegadis falcinellus					Feeds in very shallow water and nests in freshwater or brackish wetlands with tall dense stands of emergent vegetation.	No	$\otimes$
	42	Eurasian golden plover	Pluvialis apricaria					Breeds on humid moss, lichen and hummock tundra, low-lying marshes in moss tundra, shrub tundra, open bogs in forest, peatlands, alpine tundra, highland bogs, moors, and swampy highland heaths with high abundances of sphagnum moss and heather When on passage and in its winter quarters (the species frequents freshwater wetlands, moist grasslands, pastures, agricultural land.	No	$\otimes$
43       Common Hoopoe       Upupa epops       Open country such as pastures, parkland, orchards, sand-heathland, olive groves and vineyards as well as steppe and broken ground.       Yes	43	Common Hoopoe	Upupa epops					Open country such as pastures, parkland, orchards, sand-heathland, olive groves and vineyards as well as steppe and broken ground.	Yes	$\bigotimes$

www.erm.com Version: 0.1 draft (rev3)

S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?	
1	Western Barbastelle	Barbastella barbastellus	VU	Confirmed		Annex II Bern Convention VU species	Forages in mature woodland and woodland edges. In summer, roosting sites occur in mature woodlands and occasionally in older buildings. In winter the hibernation may start in trees, but later underground sites are preferred.	Yes	$\bigotimes$	
2	Serotine	Eptesicus serotinus	LC		All species of bats (Microchiroptera) are considered		Summer roosts in buildings. Individual, mostly male serotines occasionally use tree caves or nesting boxes. It usually forages around and in the canopy of trees. Main prey taxa are associated with semi-open and open habitats such as meadows and pastures with tree groups, hedges or woodland edges.	Yes	$\bigotimes$	
3	Savi's Pipistrelle	Hypsugo savii	LC		Confirmed	listed in terms of Annex IV of the EU Habitats Directive and therefore automatically qualify specie and	n/a	Forages over open woodland, pasture and wetlands, and often feeds at lights in rural areas, towns and cities. It roosts in rock crevices, occasionally in fissures in buildings or under bark, rarely in underground habitats.	Yes	$\bigotimes$
4	Daubenton's Myotis	Myotis daubentonii	LC		associated habitats as CH in terms of EBRD PR6 criterion 2		Roost in tree cavities, buildings or other artificial structures (e.g. bridges), as well as in bat boxes. It winters in a wide range of underground habitats, sometimes forming large clusters on cave walls and roof. Associated with aquatic habitats, where it preys either on the wing or trawls the water surface with its feet and/or its wing membrane.	Yes	$\bigotimes$	
5	Giant Noctule	Nyctalus Iasiopterus	VU			VU species	Forages over mixed and deciduous forest and wooded river valleys. Highly dependent on mature forest.	Yes	$\bigotimes$	
6	Lesser Noctule	Nyctalus leisleri	LC	2		n/a	Forages over woodland, pasture, and river valleys. It is linked to old trees.	Yes	$\bigotimes$	

www.erm.com Version: 0.1 draft (rev3)

S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?
7	Noctule	Nyctalus noctula	LC				Forages over wetland, woodland and pasture. Summer colonies are in tree holes, sometimes in buildings. Winter hibernacula are in rock crevices, caves, occasionally artificial structures.	Yes	$\bigotimes$
8	Nathusius' / Kuhl's Pipistrelle	Pipistrellus nathusii/kuhlii	LC				Forages over a range of habitats including woodland, edge, wetlands and open parkland. Summer roosts are located in tree holes, buildings, and bat boxes, mainly in woodland areas. Winter roost sites include crevices in cliffs, buildings and around the entrance of caves, often in relatively cold, dry, and exposed sites.	Yes	$\bigotimes$
9	Common Pipistrelle	Pipistrellus pipistrellus	LC				An adaptable species that can be found hunting in a wide range of landscapes: from urban centres to arable land and woodland but would hunt close to woodlands or riparian areas, if available. Summer roosts are mainly found in buildings and trees, and colonies frequently change roost site through the maternity period. Most winter roosts in Europe were found in crevices in buildings, although cracks in cliffs and caves, as well as tree cavities are also utilised.	Yes	$\bigotimes$
10	Soprano Pipistrelle	Pipistrellus pygmaeus	LC	-			Forages around woodland and wetlands. Maternity colonies are located in hollow trees, rock crevices and buildings.	Yes	$\bigotimes$
11	Brown Long- eared bat	Plecotus auritus	LC				Foraging habitats are woodlands, forest edges, bushes, hedges, traditional orchards, parks and gardens. Nursery colonies are mainly in tree cavities, in bird or bat	Yes	$\bigotimes$

S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?
							boxes and sometimes behind bark. It hibernates in underground roosts such as cellars, bunkers, mines and caves, as well as in rock fissures, wood piles and hollow trees.		
12	Grey big-eared bat	Plecotus austriacus	NT				Usually linked to the countryside and villages. Forages above meadows, uncultivated fields, unimproved meadows, marshes, in open forests and at forest edges and in more urbanised areas, such as orchards and parks. It avoids arable fields, conifer woods and open water. In the country grey long-eared bats use more natural habitats like field margins, hedges and scattered trees.	Yes	$\bigotimes$
13	Particoloured bat	Vespertilio murinus	LC				Forages in open areas over various habitat types (forest, semi-desert, urban, steppe, agricultural land). Roosts tend to be situated in houses or other buildings; also rarely hollow trees, nest boxes, or rock crevices.	Yes	$\bigotimes$
					Mammals				
1	European Souslik	Spermophilus citellus	EN	Confirmed		Annex II Bern Convention Revised Annex I of Resolution 6	The European Souslik has quite specific habitat requirements. It is restricted to short-grass steppe and similar artificial habitats (pastures, airfields, lawns, sports fields, golf courses) on light, well-drained soils, where it can excavate its burrows.	Yes	$\bigotimes$
2	Common Hamster	Cricetus cricetus	CR	Possible occurrence but not confirmed through field surveys	CR/EN species	Annex II Bern Convention	Its original habitat was fertile steppe and grassland, but it has successfully spread into a variety of anthropogenic habitats including meadows, croplands (especially cereals), and field edges, road verges and scrubby fallow areas on farms.	Yes	$\otimes$

www.erm.com Version: 0.1 draft (rev3)

S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?
3	Eurasian Otter	Lutra lutra	NT	Possible occurrence but not confirmed through field surveys	Annex IV species	Annex II Bern Convention Revised Annex I of Resolution 6	Variety of aquatic habitats, including highland and lowland lakes, rivers, streams, marshes, swamp forests and coastal areas.	No	$\otimes$
4	European Mink	Mustela lutreola	CR	Unlikely	Annex IV species CR/EN species	Annex II Bern Convention Revised Annex I of Resolution 6	It is semi-aquatic, inhabiting densely vegetated banks of rivers, streams and sometimes, during the warm season, it may inhabit lake-banks. It is rarely found more than 100 meters away from fresh water.	No	$\otimes$
				Herpetofaur	na: Reptiles & Amphib	ians			
1	Fire-bellied toad	Bombina bombina				Annex II Bern Convention Revised Annex I of Resolution 6	Associated with lowland areas of marshy or grassy wetlands, often along river valleys, with small, shallow, often-temporary lakes and ponds.	Yes	$\bigotimes$
2	European tree frog	Hyla orientalis (Hyla arborea)	LC	Confirmed	Annex IV species	Annex II Bern	Generally associated with open, well-illuminated broad-leaved and mixed forests, bush and shrublands, meadows, gardens, vineyards, orchards, parks, lake shores and low riparian vegetation.	Yes	$\bigotimes$
3	Green toad	Bufo viridis				Convention	A wide range of forests, forest steppe, scrubland, grassland and alpine habitat.	Yes	$\bigotimes$
4	European pond turtle	Emys orbicularis	NT				Semi-aquatic: ponds, lakes, brooks, streams, rivers, drainage canals.	Yes	$\bigotimes$
					Fish				
1	Beluga	Huso huso	CR	Highly unlikely	CR/EN species	Annex II Bern Convention	This species is anadromous, spending the majority of its life in salt water and returning into its natal rivers to reproduce. At sea, this species is found in the pelagic zone, following food organisms. It spawns	No	$\otimes$

www.erm.com Version: 0.1 draft (rev3)

S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?
							rivers on stone or gravel bottom.		
					Invertebrates				
1	Southern festoon (butterfly)	Zerynthya polyxena	LC	Confirmed	Annex IV species	Annex II Bern Convention	Grassy herb-rich meadows, vineyards, river banks, wetlands, cultivated areas, brushy places, wasteland, rocky cliffs and karst terrains, at an elevation of from 0 to 1,700 metres above sea level but usually below 900 metres.	Yes	$\bigotimes$
2	Zubowski's Plump Bush- cricket	Isophya zubowskii	EN	Possible occurrence but not confirmed through field surveys			This species occurs in mesic and semi-dry grasslands including steppes and forest clearings.	Yes	$\otimes$
3		Limoniscus violaceus	EN	Unlikely			This is an obligate saproxylic species. The larvae develop in wood mould, typically in the base of hollow living trees, usually in the trunks, with large cavities containing wood mould, primarily derived from natural fungal decay of the dead heartwood.	No	$\otimes$
4		Ropalopus ungaricus		Unlikely	CR/EN species	n/a	This is an obligate saproxylic species. Larvae develop under the bark of dying or dead branches and trunks of broad-leaved trees (especially Acer, rarely also in Ficus, Fraxinus, Alnus, Fagus, Salix), and pupate in the wood; the species prefers thick and sturdy trees.	No	$\otimes$
5	Transsylvanian Wingless Groundhopper	Tetrix transsylvanica		Unlikely			The species inhabits open forests and forest clearings.	No	$\otimes$
6	Striped Nerite	Theodoxus transversalis					This is a fluvial species, it occurs in rivers associated with solid surface.	No	$\otimes$

S/N	Common Name	Scientific Name	IUCN Global Threat Status*	(Potential) Occurrence in the Study Area	Critical habitat Qualifying Criteria (EBRD, IFC) (see Table 2-1)	PBF Qualifying Criteria (EBRD) (see Table 2-1)	Habitat Preferences (IUCN)	Suitable habitat in CHA study area?	Candidate species for CH / PBF?					
Flora (plants)														
1		Rhododendron myrtifolium	EN	Unlikely	CR/EN species	n/a	This shrub, usually less than 60 cm, is found in forest pine scrub to open moorland on acid and limestone. It can form large stands in the alpine heaths growing along with Juniperus nana.	No	$\otimes$					
*IUCI	N Global Red List	status: CR = Criticall	*IUCN Global Red List status: CR = Critically Endangered; EN = Endangered; VU = Vulnerable; NT = Near Threatened; DD = Data Deficient; LC = Least Concern											

For the purpose of evaluating critical habitat potential for key species screened in **Table 3-2**, species EAAAs were identified for key species. Given the large number of species considered in the assessment, ERM opted to group species with similar habitat preferences, to determine three 'umbrella' EAAAs as follows:

- EAAA for species considered generalists (not having any specific habitat preferences and which commonly occur across steppe, forest and modified habitats (e.g. agricultural fields / meadows);
- EAAA for species that have an affinity for forest and edge habitats associated with forest-steppe and wooded areas; and
- EAAA for species that have a specific preference for steppe, grassland and wetlands in steppic habitat.

This is aligned with the IFC PS6 guidelines on critical habitat assessment contained in GN6 (IFC, 2019) and more specifically:

- GN59:
  - "For some wide-ranging species, critical habitat may be informed by areas of aggregation, recruitment, or other specific habitat features of importance to the species."
  - "Where it can be shown that multiple values have largely overlapping ecological requirements and distributions, a common or aggregated area of critical habitat may be appropriate"

These EAAAs are indicated on the maps below (**Figures 3-2**, **3-3** and **3-4**) that show the extent of each of the EAAAs defined for the CHA study area and in relation to the Project, with a description given and a list of the candidate CH/PBF qualifying species associated with each EAAA.

1 EAAA	A identified for habitat generalists				
Birds:	Upupa epops				
•	Ciconia ciconia				
•	Corvus corax				
•	Falco peregrinus				
•	Melanocorypha calandra				
•	Milvus migrans				
•	Streptopelia turtur				
	EAAA supports candidate species that could qualify EAAA as critical habitat?	$\otimes$			
	EAAA supports candidate species that could qualify species and EAAA as PBF?	$\bigotimes$			
Total ex	xtent of EAAA: 45,588 ha				
Percentage of CHA study area: ~87%					
	Figure 3-2 EAAA identified for habitat generalist species				



2 EAAA identified for habitat specialists: forest, forest-steppe, woodland						
Birds:	<ul> <li>Hypsugo savii</li> </ul>					
Accipiter brevipes	Myotis daubentoniid					
Aquila pennata	Nyctalus lasiopterus					
Circaetus gallicus	Nyctalus leisleri					
Circus cyaneus	Nyctalus noctule					
Falco columbarius	Pipistrellus nathusii/kuhlii					
Falco vespertinus	<ul> <li>Pipistrellus pygmaeus</li> </ul>					
Pernis apivorus	Plecotus auritus					
Mammals (including bats):	Herpetofauna:					
<ul> <li>Barbastella barbastellus</li> </ul>	Bufo viridis					
Eptesicus serotinus	Hyla orientalis					
EAAA supports candidate species	that could qualify EAAA as critical habitat?					
EAAA supports candidate species that could qualify species and EAAA as PBF?						
Total extent of EAAA: 2,222 ha						
Percentage of CHA study area: ~4%						



FIGURE 3-3 EAAA IGENIINEG IGI IGIESI. IGIESI-SIEDDE, WOOGIANG SDECIANSI	Figure 3-3	EAAA	identified f	or forest.	forest-steppe.	woodland s	pecialists
---	------------	------	--------------	------------	----------------	------------	------------

3 EAAA identified for habitat specialists: steppe, grassland, wetlands in steppe						
Birds:						
Anthus campestris	Mammals (including bats):					
Burhinus oedicnemus     Spermophilus citellus						
Buteo rufinus     Nyctalus noctula						
Circus macrourus						
Circus pygargus	Herpetofauna:					
Corvus frugilegus	Bombina bombina					
Falco columbarius	Bufo viridis					
Falco vespertinus	Emys orbicularis					
Glareola pratincole						
Lanius collurio	Invertebrates:					
Lanius minor	<ul> <li>Zerynthya polyxena</li> </ul>					
Vanellus vanellus						
EAAA supports candidate specie	s that could qualify EAAA as critical habitat?					
EAAA supports candidate species that could qualify species and EAAA as PBF?						
Total extent of EAAA: 13,493 ha						
Percentage of CHA study area: ~26%						
-						

## Figure 3-4 EAAA identified for steppe, grassland and wetland in steppe habitat specialists

www.erm.com Version: 0.1 draft (rev3) Energy



European Souslik / Ground Squirrel (*Spermophilus citellus*, globally EN), is the only species identified for the study area that potentially qualifies for critical habitat in terms of criterion 2 (threatened species), given its globally endangered threat status.

According to the EBRD and IFC thresholds for criterion 2, the habitats in the study area must support 'globally significant' concentrations of these key species identified (0.5 % of the global population AND 5 reproductive units of a CR or EN species; areas containing nationally/regionally-important concentrations of an IUCN Red-listed EN or CR species). *This is unless the EAAA for the species and their habitats are listed in Annex IV of the EU Habitats Directive, in which case these species qualify as CH automatically (no thresholds set).* 

96 individuals of *Spermophilus citellus* were recorded during the field surveys undertaken in August 2022 (see map in **Figure 3-5** below).





The European Souslik (Ground squirrel) is endemic to central and south-eastern Europe (see map in Figure 3-6 showing the global range as indicated by the IUCN). An estimate of the global range extent is roughly 432,583 km<sup>2</sup>, with the portion of this range located within Romania being around 25% (108,452 km<sup>2</sup>). There is limited information on the global, regional and national populations of *S. citellus*, with only a few dated Romanian studies (e.g. Baltag *et al.*, 2014). This makes it inherently difficult to evaluate the potential significance of the site in terms of globally or regionally significant populations. Whilst degraded natural steppe areas covering a large part of the project area and the EAAA for steppe habitat specialists (see map in Figure 3-4) appear to provide a suitable environment for feeding, sheltering and breeding of this species in their natural state, given that the structural and compositional characteristics of these habitats has been heavily modified as a result of degradation caused by overgrazing, these areas are likely to be less suitable for supporting this species.





Source of data: IBAT, IUCN, Google Earth™

Whilst the EOO (Estimated Extent of Occurrence) for Souslik is currently not documented by IUCN, comparing the extent of the steppe habitat in the protected area with that in Romania, there are 49 SCI's in Romania designated for steppe habitat, and not all steppe is included in the SCI's. There are 15,858 km<sup>2</sup> of Pannonian steppe (shared between four countries), and 7,210 km<sup>2</sup> of Steppic habitat (all contained within Romania) (European Commission, 2009). Comparing the 13,493 ha (134 km<sup>2</sup>) of degraded steppe in the CHA study area therefore represents less than 2% of the steppic habitat present in Romania and around 0.5% of the broader combined Pannonian and steppic habitat in Europe. So at the global level, this may in fact meet the 0.5% threshold for qualifying the steppic habitat in the study area as critical habitat for Souslik in terms of criterion 2. However, given that *Spermophilous citellus* also utilises similar artificial habitats to natural steppe (e.g. secondary grassland, meadows, pastures, lawns, etc.), the actual habitat for this species is likely to be larger than simply the steppic habitat extent within central and south-eastern Europe's Natura 2000 sites, such that steppe at the project site is considered unlikely to qualify as critical habitat for European Souslik in this regard.

That being said, since *S. citellus* and its preferred habitat in the study area (*Pannonic salt steppes*) is listed in terms of Annex IV of the EU habitats directive, this species and the defined EAAA in Figure 3-4 automatically as critical habitat in terms of the EBRD PR6 qualifying criteria for CH, which does not include specific thresholds.

Other than globally CR/EN species, EBRD PR6 includes EAAAs that support important concentrations of national/regionally EN or CR species. Nationally CR/EN bird species for Romania recorded in the CHA study area include:

- Falco peregrinus
- Haliaeetus albicilla
- Himantopus himantopus\*
- Circus macrourus
- Circus pygargus
- Corvus corax
- Egretta garzetta\*
- Milvus migrans
- Tadorna ferruginea\*

The numbers recorded in the study area (based on the baseline for the ESIA, ERM 2023) are considered relatively small in proportion to identified national populations for these species however, and only a few pairs were confirmed breeding for species with an asterix<sup>\*</sup>, and so it can be argued that these are not present in important concentrations to qualify the study area EAAAs as CH in this respect.

However, the automatic qualification of EAAAs supporting species and their habitat listed in terms of Annex IV of the EU Habitats Directive also applies to the following species and their EAAAs:

- Bombina bombina
- Hyla orientalis
- Bufo viridis
- Emys orbicularis
- Zerynthya Polyxena
- As well as all species of bats (Microchiroptera) are considered listed in terms of Annex IV of the EU Habitats Directive

For these species, the two EAAAs for (1) forest/woodland/forest-steppe and (2) steppe/wetland specialist species would qualify therefore also as critical habitat,

The steppic habitats in the study area are considered degraded and largely unsuitable for critical habitat qualifying species, with estimates revealing that the area of degraded steppic habitat associated with the Natura 2000 site in the CHA study area is unlikely to support a globally and regionally significant population of European Souslik, that would meet or exceed the 0.5% threshold for critical habitat. However, European Souslik , *Spermophilus citellus* is listed in terms of Annex IV of the EU habitats directive, and this species qualifies the associated steppe habitat as critical habitat in terms of the EBRD PR6 qualifying criteria for CH. In the same sense, the EAAAs for steppe/wetland and forest/woodland species specialists also automatically qualify as CH for several additional species confirmed in the study area (amphibians, reptiles, invertebrate) which are listed in Annex IV of the EU Habitats Directive.

## 3.2.2 PBF Qualifying Species

In terms of EBRD PR6 Criterion 2 for Priority Biodiversity Features (PBFs), several habitats, species of birds, herpetofauna (amphibians and reptiles) and small mammals qualify as PBFs, based on their

confirmed presence in the study area and EAAA through baseline surveys and availability of suitable supporting steppe habitat based on the following requirements being met in terms of EBRD PR6:

- EAAA is habitat type listed in Annex 1 of EU Habitats Directive or Resolution 4 of Bern Convention;
- EAAA for species and their habitats listed in Annex II of Habitats Directive, Annex I of Birds Directive (EU members only), or Resolution 6 of the Bern Convention;
- EAAA supports VU species; and/or
- EAAA for regularly occurring nationally or regionally listed EN or CR species.

This includes 37 species of birds, two species of bat, one non-volant mammal species, three amphibians and one reptile as well as one species of insect. These are indicated in **Table 3-3** that follows. In terms of the EBRD PR6 qualifying criteria, the PBF qualifying species are all associated with all three EAAAs identifies (EAAA for generalist species, forest specialists and steppe/wetland specialists), thus at a precautionary level, the broader generalist species EAAA can be considered as qualify as PBF, given there are no numerical thresholds for PBFs that qualify in terms of the listing of species in the EU Habitats Directive, Birds Directive or Resolution 4 of the Bern Convention, as detailed below in **Table 3-3**.

S/N	Faunal Group	Scientific Name	Common Name	IUCN Global Threat Status*	Potential Occurrence in the Study Area	EU Habitats Directive, EU Birds Directive	PBF Qualifying Criteria (EBRD, Table 2-1)
1		Accipiter brevipes	Levant Sparrowhawk	LC	Confirmed		
2		Anthus campestris	Tawny pipit	LC	Confirmed		
3		Aquila pennata (Hieraaetus pennatus)	Booted eagle	LC	Confirmed	-	
4		Aquila pomarina	Lesser Spotted Eagle	LC	Confirmed		
5		Ardea alba	Great White Egret	LC	Confirmed	-	EAAA for species and
6		Ardea purpurea	Purple heron	LC	Confirmed		their habitats
7		Burhinus oedicnemus	Eurasian thick- knee	LC	Confirmed	Revised	listed in Annex II of Habitats
8	Birds	Buteo rufinus	Long-legged buzzard	LC	Confirmed	Resolution 6	Directive, Annex I of
9		Ciconia ciconia	White stork	LC	Confirmed		Directive, or
10		Ciconia nigra	Black stork	LC	Confirmed		Resolution 6 of Bern
11		Circaetus gallicus	Short-toed snake-eagle	LC	Confirmed	-	Convention
12		Circus aeruginosus	Western marsh- harrier	LC	Confirmed	-	
13		Circus cyaneus	Hen harrier	LC	Confirmed		
14		Circus macrourus	Pallid harrier	LC	Confirmed		
15		Circus pygargus	Montagu's harrier	LC	Confirmed		

 Table 3-3
 PBF qualifying species in accordance with EBRD PR6

S/N	Faunal Group	Scientific Name	Common Name	IUCN Global Threat Status*	Potential Occurrence in the Study Area	EU Habitats Directive, EU Birds Directive	PBF Qualifying Criteria (EBRD, Table 2-1)
16		Cygnus cygnus	Whooper Swan	LC	Confirmed	Annex II	
17		Egretta garzetta	Little egret	LC	Confirmed	Bern Convention Revised Annex I of Resolution 6	
18		Falco columbarius	Merlin	VU	Confirmed		EAAA supports VU species
19		Falco eleonorae	Eleonora's Falcon	LC	Confirmed		EAAA for species and
20		Falco peregrinus	Peregrine Falcon	LC	Confirmed	Revised	their habitats listed in Annex II of Habitats Directive, Annex I of Birds Directive, or Resolution 6 of Bern Convention
21		Falco vespertinus	Red-footed falcon	VU	Confirmed	Resolution 6	EAAA supports VU species
22		Glareola pratincola	Collared pratincole	LC	Confirmed		
23		Grus grus	Common crane	LC	Confirmed		
24		Haliaeetus albicilla	White-tailed sea-eagle	LC	Confirmed		
25		Himantopus himantopus	Black-winged stilt	LC	Confirmed	_	
26		Lanius collurio	Red-backed shrike	LC	Confirmed	_	
27		Lanius minor	Lesser Grey Shrike	LC	Confirmed		species and their
28		Melanocorypha calandra	Calandra lark	LC	Confirmed	Annex II Bern Convention Revised Annex I of Resolution 6	habitats listed in Annex II of Habitats Directive, Annex I of Birds Directive, or
29		Milvus migrans	Black kite	LC	Confirmed	Revised Annex I of Resolution 6	6 of Bern Convention
30		Nycticorax nycticorax	Black-crowned Night-heron	LC	Confirmed	Annex II Bern Convention Revised Annex I of Resolution 6	
31		Pelecanus onocrotalus	Great white pelican	LC	Confirmed	Revised Annex I of	

S/N	Faunal Group	Scientific Name	Common Name	IUCN Global Threat Status*	Potential Occurrence in the Study Area	EU Habitats Directive, EU Birds Directive	PBF Qualifying Criteria (EBRD, Table 2-1)
32		Pernis apivorus	European honey-buzzard	LC	Confirmed	Resolution 6	
33		Philomachus pugnax	Ruff	LC	Confirmed	-	
34		Platalea leucorodia	Eurasian spoonbill	LC	Confirmed	-	
35		Plegadis falcinellus	Glossy ibis	LC	Confirmed	-	
36	-	Pluvialis apricaria	Eurasian golden plover	LC	Confirmed	-	
37		Tadorna ferruginea	Ruddy shelduck	LC	Confirmed	Annex II Bern Convention Revised Annex I of Resolution 6	_
		L				1	1
1	Mammala (bata)	Barbastella barbastellus	Western Barbastelle	VU	Confirmed	Annex II Bern Convention	EAAA for species and their habitats listed in Annex II of Habitats Directive, Annex I of
2		Nyctalus lasiopterus	Giant Noctule	VU	Confirmed	-	Birds Directive, or Resolution 6 of Bern Convention EAAA supports VU species
	1	1					
1	Mammals (other)	Spermophilus citellus	European Souslik	EN	Confirmed	Annex II Bern Convention Revised Annex I of Resolution 6	EAAA for species and their habitats listed in Annex II of Habitats Directive, Annex I of Birds Directive, or Resolution 6 of Bern Convention

Annex II

Bern

Convention

Habitats

Directive,

Annex I of Birds Directive, or Resolution 6 of Bern Convention

S/N	Faunal Group	Scientific Name	Common Name	IUCN Global Threat Status*	Potential Occurrence in the Study Area	EU Habitats Directive, EU Birds Directive	PBF Qualifying Criteria (EBRD, Table 2-1)
1		Bombina bombina	Fire-bellied toad	LC	Confirmed	Annex II Bern Convention Revised Annex I of Resolution 6	EAAA for species and their habitats listed in
2	Herpetofauna	Hyla orientalis (Hyla arborea)	European tree frog	LC	Confirmed	Annex II Bern	Annex II of Habitats Directive, Annex I of
3	•	Bufo viridis	Green toad	LC	Confirmed	Convention	
4		Emys orbicularis	European pond turtle	NT	Confirmed	Annex II Bern Convention Revised Annex I of Resolution 6	Birds Directive, or Resolution 6 of Bern Convention
		O the sure				A	EAAA for species and their habitats listed in Annex II of

LC

Confirmed

## 3.3 Criterion 2: Restricted-range species (and endemics – IFC PS6)

Zerynthya

polyxena

Not applicable - no endemic or restricted-range species have been identified for the study area.

## 3.4 Criterion 2: Migratory and congregatory species

Southern

(butterfly)

festoon

1

Invertebrates

According to the EBRD PR6 and IFC PS6 thresholds for this criterion, the EAAA defined in the study area must support 'globally significant' concentrations of these key species identified ( $\geq 1$  % of the global population of a migratory or congregatory species at any point of the species' lifecycle or areas that predictably support  $\geq 10$  % of the global population of a species during periods of environmental stress). In the studies carried out within the scope of the project, it was determined that there were no bird and/or bat species populations supported in the EAAAs that exceed  $\geq 10$  % of the global population.

No migratory or congregatory species are considered as critical habitat triggers based on the baseline studies undertaken to assess migration through the wind farm. Birds, including migratory birds, have been considered in the collision risk assessment.

Considering the Natura 2000 sites within the EAAA for volant species, ROSPA0145 Valea Călmăţuiului is a Special Protection Area (SPA) defined in terms of the EU Birds Directive, with key species including several migratory and congregatory species listed in terms of the Birds Directive that include:

- Anas clypeata concentration
- Burhinus oedicnemus breeding
- Ciconia ciconia concentration
- Glareola pratincola breeding
- Himantopus himantopus reproduction
- Limosa limosa concentration
- Numenius arquata concentration
- Oenanthe isabellina breeding
- Philomachus pugnax concentration
- Recurvirostra avosetta breeding
- Tadorna tadorna breeding

This triggers the PBF criterion (EAAA identified per Birds Directive or recognized national or international process as important for migratory birds (esp. wetlands) (see Table 2-1) in terms of EBRD PR6. *Note however, that the species listed above are already considered PBFs in terms of their listing in in Annex II of Habitats Directive, Annex I of Birds Directive, or Resolution 6 of Bern Convention.* 

The critical habitat requirements/thresholds for criterion 2 (areas critical for migratory species) have not been met in terms of the key species identified.

The Natura 2000 site ROSPA0145 Valea Călmățuiului is a Special Protection Area (SPA) identified in terms of the EU Bird's Directive and therefore does qualifies the related migratory and congregatory species and their respective EAAAs associated with the Natura 2000 site as PBFs.

## 3.5 Additional: Areas associated with key evolutionary processes (IFC PS6)

The study area is not known to contain landscape feature and/or subpopulations of species with unique evolutionary history. In fact, the study area is not characterized by a particular level of isolation, spatial heterogeneity, and wealth of environmental gradients or edaphic interfaces. Moreover, the area is not considered to be of demonstrated importance as to climate change adaptation or as biological corridor. These considerations suggest that the study area does not support any key evolutionary processes.

Therefore, no Critical Habitat is expected to be present in the according to this criterion of IFC PS6.

The requirements/thresholds for this IFC PS6 criterion (key evolutionary processes) have not been met.

## 3.6 Legally Protected Areas and Internationally Recognized Areas

According to IFC PS6, paragraph 20 in circumstances <u>where a proposed project is located within a legally</u> <u>protected area or an internationally recognized area</u>, the client will meet the requirements of paragraphs 13 through 19<sup>13</sup> of PS6, as applicable (IFC, 2012) and the relevant section titled '*Legally Protected and Internationally Recognised Areas of Biodiversity Value*' within EBRD PR6 (EBRD, 2022).

The Project area partially overlaps with the Natura 2000 sites ROSCI0259 Valea Călmățuiului (Site of Community Importance/SCI) and ROSPA0145 Valea Călmățuiului (Special Protection Area/SPA). The project area is located on the Valea Călmățuiului (see **Table 3-4** and **Figure 3-7**).

<sup>&</sup>lt;sup>13</sup> Paragraphs 13-19 of IFC PS6 are specially related to natural, modified and critical habitats determination and management.

No.	Natura 2000 Sites	Species/ habitats under protection				
1.	ROSCI0259 Valea Călmăţuiului (SCI)	Habitats:         1530* Pannonic salt steppes and salt marshes         3260 Water courses of plain to montane levels with the Ranunculion fluitante         Callitricho-Batrachion vegetation         Mammals:         1355 Lutra lutra         1335 Spermophilus citelus         Herptiles:         1188 Bombina bombina         1220 Emys orbicularis         Fish:         6963 Cobitis taenia         Insects:				
2.	ROSPA0145 Valea Călmăţuiului (SPA)	<b>Bird species:</b> A056 Anas clypeata - concentration A133 Burhinus oedicnemus - breeding A031 Ciconia ciconia - concentration A135 Glareola pratincola - breeding A131 Himantopus himantopus - reproduction	<ul> <li>A156 Limosa limosa - concentration</li> <li>A160 Numenius arquata - concentration</li> <li>A435 Oenanthe isabellina - breeding</li> <li>A151 Philomachus pugnax - concentration</li> <li>A132 Recurvirostra avosetta - breeding</li> <li>A048 Tadorna tadorna - breeding</li> </ul>			

## Table 3-4 Natura 2000 Sites overlapping Vifor Project area

## Figure 3-7: Map showing Protected Areas (PAs) and Key Biodiversity Areas (KBAs) within a 50 km radius of the Project



## 4. IMPLICATIONS FOR THE PROJECT

## 4.1 Critical Habitat

The CHA has identified the EAAAs containing suitable habitat for forest/woodland and steppe/wetland specialist species as critical habitat, mainly from the perspective of these EAAAs and associated habitats supporting species that are listed in Annex IV of the EU Habitats Directive, which automatically qualifies the EAAAs as critical habitat in terms of the EBRDS PR6 CH guidelines and requirements.

This presents an interesting case, in that where one strictly applies the CH criteria and thresholds of IFC PS6, one would likely conclude that the EAAA does not meet the thresholds to qualify the key species (endangered *Spermophilus citellus*) as critical habitat, however the EBRD criteria automatically qualify certain species and habitats as critical habitat by virtue of their inclusion as listed species in the EU Habitats Directive.

Critical habitat has been mapped for the study area (EAAAs comprising steppe/wetland and mixed forest habitats) and this is shown on the map in **Figure 4-1**.. This was assigned as critical habitat on the following basis:

- The steppic habitats in the study area are considered representative of EU priority habitat type: 1530\* Pannonic salt steppes and salt marshes, and in terms of the EBRD PR6 critical habitat criteria, this qualifies the steppe habitats in the study area as both Critical Habitat and as a PBF (Priority Biodiversity Feature); and
- Critical habitat is also triggered for *S. citellus*, several herpetofauna (amphibians and reptiles) and invertebrates listed in Annex IV of the EU Habitats Directive (see Chapter 3 of this report), with associated supporting habitat for these species being the steppe (grassland/wetland) and remaining mixed forests in the study area.

In terms of the EBRD PR6 and IFC PS6 requirements for critical habitat, the following applies to the project:

Section 3.1.2 of EBRD PR6 (2022) state that: "Where the proposed project or plan impacts priority biodiversity features it must be shown there are "no technically and economically feasible alternatives" and where impacts are expected on critical habitats, "no other viable alternatives within the region exist for development of the project in habitats of lesser biodiversity value." As required in PR1, projects must include an analysis of alternatives in terms of "project location, technology, size, scale and design, mitigation options, and a 'without project' scenario." Biodiversity and ecosystem impacts should be included in that analysis."

Paragraph 16 of IFC PS6 (2012) states that: "Critical habitat must not be further fragmented, converted or degraded to the extent that its ecological integrity or biodiversity importance is compromised. Consequently, in areas of critical habitat, the client will not implement any project activities unless:

- no other viable alternatives within the region exist for development of the project in habitats of lesser biodiversity value
- stakeholders are consulted in accordance with PS 10
- the project is permitted under applicable environmental laws, recognising the priority biodiversity features
- the project does not lead to measurable adverse impacts on those biodiversity features for which the critical habitat was designated
- the project is designed to deliver net gains (through a biodiversity offset to enhance habitat and protect and conserve biodiversity) for critical habitat impacted by the project
- the project is not anticipated to lead to a net reduction in the population of any endangered or critically endangered species over a reasonable time period

a robust and appropriately designed, long-term biodiversity monitoring and evaluation programme aimed at assessing the status of critical habitat is integrated into the client's adaptive management programme."

Where the proposed project or plan impacts priority biodiversity features it must be shown there are "no technically and economically feasible alternatives" and where impacts are expected on critical habitats, "no other viable alternatives within the region exist for development of the project in habitats of lesser biodiversity value." As required in PR1, projects must include an analysis of alternatives in terms of "project location, technology, size, scale and design, mitigation options, and a 'without project' scenario." Biodiversity and ecosystem impacts should be included in that analysis.

To achieve a <u>Net Gain (NG) in terms of CH</u>, which in this instance is linked to Pannonic salt steppes and salt marshes habitat in the vicinity of the wind farm, which is Priority Habitat Types listed in Resolution 4 of the Bern Convention (see critical habitat map in **Figure 4-2**), the following is recommended:

- The Biodiversity Impact Assessment (BIA) section of the ESIA will describe measures to avoid and minimize impacts on CH identified as steppe and salt marsh habitats and associated qualifying CH faunal species as far as possible, in accordance with the mitigation hierarchy;
- The BIA will cover embedded mitigation and measures to be implemented as part of construction and operational activities;
- Review of the known key threats in the region and site locality affecting the Pannonic steppe and salt marsh habitat for which CH has been identified to inform further mitigation options;
- Review of the known key threats in the region and site locality affecting the species for which CH has been identified to inform further mitigation options;
- Stakeholder consultation to be prioritised for understanding biodiversity threats and if there are any
  existing steppe habitat recovery programmes in place that may provide NG/offset opportunities for
  the project;
- Investigate habitat management enhancements or creation to achieve habitat and species net gains at the scale of the CH study area/EAAA;
- Monitoring and management based on pre-established targets and goals using quantified data, and reviews at appropriate intervals to determine the success of habitat protection and/or enhancement measures; and
- Required measures to achieve NG are to be addressed within a **Biodiversity Action Plan (BAP)** that is to be compiled in terms of the requirements of EBRD PR6 and IFC PS6, including:
  - Map and quanify the loss of the priority Pannonic salt steppes and salt marshes habitat affected by the project and develop NG requirements and targets;
  - Identify how NG for habitat (and species, using habitat as a proxy potentially) should be achieved through habitat enhancement measures / offsets where relevant;
  - Develop a 'species management plan' as part of the broader BAP for the project for CH qualifying species (i.e. European Souslik and Annex IV species: bats, herpetofauna, invertebrates);
  - Assessment of local population and identification of any significant colonies and size/condition;
  - Identification of key impact areas (where site infrastructure intersects known Souslik colonies for example);
  - Avoidance of direct impacts to identified Souslik colonies as far as possible;
  - Plan for staged relocation of individuals for impacted colonies (where necessary), involving a recognised Souslik expert and agreed with the relevant regulatory authorities and stakeholders; and
  - Implement a long-term monitoring programme for Souslik (and other PBF qualifying species) in the project area.



Figure 4-1: Map showing critical habitat (degraded steppe/wetland and mixed forest EAAAs) in the CHA study area

www.erm.com Version: 0.1 draft (rev3)

Project No.: 0667256



## Figure 4-2: Focal area map showing 1530\* Pannonic salt steppes and salt marshes in the vicinity of wind turbine infrastructure planned

Source: ERM (2023)

## 4.2 Natural Habitat

The key requirement for remaining natural areas (i.e. apart from those classified as EU priority habitat type: 1530\* Pannonic salt steppes and salt marshes) will be to ensure <u>No Net Loss (NNL) of PBFs and</u> <u>remaining natural habitat</u> (see map in **Figure 4-3**), in line with the IFC PS6 (2012) requirements, which include:

*"14. The client will not significantly convert or degrade natural habitats, unless all of the following are demonstrated:* 

- No other viable alternatives within the region exist for development of the project on modified habitat;
- Consultation has established the views of stakeholders, including Affected Communities, with respect to the extent of conversion and degradation; and
- Any conversion or degradation is mitigated according to the mitigation hierarchy."

*"15. In areas of natural habitat, mitigation measures will be designed to achieve no net loss of biodiversity where feasible. Appropriate actions include:* 

- Avoiding impacts on biodiversity through the identification and protection of set-asides;
- Implementing measures to minimize habitat fragmentation, such as biological corridors;
- Restoring habitats during operations and/or after operations; and
- Implementing biodiversity offsets."

and the requirements of EBRD PR6 pertaining to legally protected areas, which include:

- "In addition to the other requirements of PR6, projects with the potential to negatively affect a legally protected area must respect the conservation goals of the area and the features it seeks to protect."
- "Projects that may impact a protected area either from within or outside of its boundaries and will degrade its ability to meet its management goals will not comply with PR6. In cases where there is potential for impacts to occur, project design must include consultation with protected area authorities."
- "Projects may not have any significant residual impacts on Natural World Heritage Sites (as described elsewhere in this guidance as non-offsetable impacts)."



## Figure 4-3: Map showing the WTGs relative to degraded 'natural' habitat

## 4.3 **Priority Biodiversity Features**

In terms of EBRD PR6 Criterion 2 for Priority Biodiversity Features (PBFs), several species of birds. Herpetofauna (amphibians and reptiles) and small mammals qualify as PBFs (this includes 37 species of birds, two species of bat, three other non-volant mammal species, three amphibians and one reptile species). The Natura 2000 site ROSPA0145 Valea Călmățuiului is also a Special Protection Area (SPA) identified in terms of the EU Bird's Directive and therefore qualifies the related migratory and congregatory species associated with the Natura 2000 site as PBFs [these are already considered PBFs in terms of criterion 2].

It is recommended that the Biodiversity Action Plan (BAP) also consider appropriate mitigation measures that may be required for PBF species. This is likely to require focused mitigation around the habitats supporting these species (steppe grassland/wetland and forests/woodlands) and possible habitat enhancement to compensate for any impacts resulting from the Project on the salt marsh and steppe habitats in the Project area and associated PBF species (birds, small mammals, bats, amphibians, reptiles).

In addition, since the Project area overlaps with the designated Special Protection Area (SPA) known as the "ROSPA0145 Valea Călmățuiului" and Site of Community Importance (SCI) known as the "ROSCI0259 Valea Călmățuiului" [with the majority of wind turbine positions (60 of 71) being located within the Natura 2000 protected areas (see map in Figure 4-4)], the requirements of EBRD PR6 and IFC PS6 with respect to legally protected areas apply to the Project. These revolve primarily around natural habitat identification and management, including:

"if the assessment identifies that the project has the potential to adversely impact the conservation objectives and integrity of the site, priority biodiversity features and/or critical habitat within the internationally recognised areas the client will seek to avoid such impacts. In addition, the client will:

- demonstrate that the development is legally permitted, which may have entailed that a specific assessment of the project related impacts on the protected area has been carried out as required under national law;
- act in a manner consistent with any government recognised management plans for such areas;
- consult protected areas managements, relevant authorities, local communities and other stakeholders on the proposed project in accordance with PR10; and
- implement additional programmes as appropriate to promote and enhance conservation objectives of area." (EBRD PR6).

In terms of EBRD PR6, for projects that impact CH or PBFs, loss-gain analysis will be necessary to establish that NG or NNL is achieved, respectively. EBRD requires that the analysis be specific to the biodiversity features impacted by the planned development, and whilst it is acknowledged that there is no single method that can be applied in all cases, some basic principles apply:

- The units of measure for impact assessment must be consistent with those for measuring the benefits of a biodiversity offset; and
- They should reflect both the quantity and quality of the feature (e.g. if a threatened species' habitat is measured, its extent as well as its quality relative to the species' optimal habitat requirements are important to consider).



## Figure 4-4: Map showing the WTGs relative to designated Protected Areas

## 5. CONCLUSION

After screening several habitat types and species and running through the critical habitat qualifying criteria and thresholds contained in EBRD PR6 and IFC PS6, it was determined that selected steppic habitats are representative of the EU priority habitat type: **1530\* Pannonic salt steppes and salt marshes, which qualifies these habitats as both Critical Habitat and as a PBF (Priority Biodiversity Feature)**. Critical habitat is also triggered for the globally endangered European Souslik (*Spermophilus citellus*), herpetofauna (amphibians and reptiles), bats and invertebrates **listed in Annex IV of the EU Habitats Directive** (*see Chapter 3 of this report*), with associated supporting habitat for these species being the steppe (grassland/wetland) and remaining mixed forests in the study area.

This Project presents an interesting scenario, in that where one strictly applies the CH criteria and thresholds of IFC PS6, one would likely conclude that the EAAA does not meet the thresholds to qualify the key species (endangered *Spermophilus citellus*) as critical habitat, however the EBRD criteria automatically qualify certain species and habitats as critical habitat by virtue of their inclusion as listed species in the EU Habitats Directive. Nevertheless, discussions held with the IFC in February 2024 indicates that the IFC would apply the stricter conditions, in this case aligning with the critical habitat and PBFs identified through the application of the EBRD criteria/thresholds for CH and PBF qualification.

In terms of EBRD PR6 and IFC PS6 requirements for critical habitat, the project will need to be designed to **deliver net gains (NG) for critical habitat (degraded steppe) potentially impacted** by the project. The required measures to achieve NG are to be addressed within a **Biodiversity Action Plan (BAP)** that is to be compiled in terms of the requirements of EBRD PR6 and IFC PS6. It is also recommended that the **BAP also consider appropriate mitigation measures that may be required for PBF species**.

Finally, the wind farm overlaps with identified legally protected areas. Therefore, the requirements in terms of paragraph 20 of IFC PS6 apply to the Project, and these revolve primarily around natural habitat identification and management. All of the planned WTGs (71 total planned turbines) are located within identified (degraded) natural habitat associated with the Natura 2000 site, and therefore a key requirement will be **ensuring No Net Loss (NNL) of other natural habitat** in line both with the EBRD PR6 and IFC PS6 requirements.

## 6. **REFERENCES TO KEY LITERATURE**

Baltag, E., Zaharia, G., Fasolă-Mătăsaru, L. and Ion, C. (2014). EUROPEAN GROUND SQUIRREL (MAMMALIA: RODENTIA) POPULATION FROM EASTERN ROMANIA: DENSITY, DISTRIBUTION AND THREATS. European Scientific Journal. Available online at:

Ekstrom, J., Bennun, L. and Mitchell, R., 2015. A cross-sector guide for implementing the Mitigation Hierarchy. The Biodiversity Consultancy Ltd with inputs from the IFC (International Finance Corporation). Cambridge, United Kingdom. Available online at: <u>https://www.csbi.org.uk/wp-content/uploads/2017/10/CSBI-Mitigation-Hierarchy-Guide.pdf</u>

European Bank for Reconstruction and Development (EBRD) (2022). Performance Requirement 6: Biodiversity Conservation and Sustainable Management of Living Natural: Guidance Note (updated September 2022).

 European Union (EU) (2016). European Red List of Habitats: Part 2. Terrestrial and freshwater habitats.

 Luxembourg:
 Publications

 Office of the European Union, 2016.
 SBN 978-92-79-61588-7. doi:

 10.2779/091372Available
 online:

https://ec.europa.eu/environment/nature/knowledge/pdf/terrestrial\_EU\_red\_list\_report.pdf

European Commission, 2009. Natura 2000 in the Steppic Region. Available online at: <u>https://www.miteco.gob.es/es/biodiversidad/temas/espacios-protegidos/pbl rn region estepica tcm30-197213.pdf</u>).

International Finance Corporation (IFC) World Bank Group (2012). Guidance Note 6: Biodiversity Conservation and Sustainable Natural Resource Management. Guidance Note corresponding to IFC Performance Standard 6: 'Biodiversity Conservation and Sustainable Management of Living Natural Resources'. 1 January 2012 (updated 27 June 2019).

Janák M., Marhoul P., Matějů J., 2013. Action Plan for the Conservation of the European Ground Squirrel *Spermophilus citellus* in the European Union. European Commission.

Šefferova Stanova V., Janak M. & Ripka J. (2008). Management of Natura 2000 habitats. 1530 \*Pannonic salt steppes and salt marshes. European Commission. Available online at: https://ec.europa.eu/environment/nature/natura2000/management/habitats/pdf/1530\_Pannonic\_salt\_step pes.pdf

Surov, A., Banaszek, A., Bogomolov, P., Feoktistova, N. and Monecke, S., 2016. Dramatic global decrease in the range and reproduction rate of the European hamster *Cricetus cricetus*. *Endangered species research*, *31*, pp.119-145.

450 MW Vis Viva Wind Farm Buzău County and 552 MW Adamdel Wind Farm Constanta County, Romania, Biodiversity Monitoring Report 1, ERM (August, 2022).

450 MW Vis Viva Wind Farm Buzău County and 552 MW Adamdel Wind Farm Constanta County, Romania Biodiversity Monitoring Report 2, ERM (November, 2022).

450 MW Vis Viva Wind Farm Buzău County and 552 MW Adamdel Wind Farm Constanta County, Romania Biodiversity Monitoring Report 3, ERM (January, 2023).

450 MW Vis Viva Wind Farm Buzău County and 552 MW Adamdel Wind Farm Constanta County, Romania Scoping Report, ERM (January, 2023).

## ERM has over 160 offices across the following countries and territories worldwide

Argentina New Zealand Australia Norway Belgium Panama Brazil Peru Poland Canada Chile Portugal China Puerto Rico Colombia Romania France Singapore Germany South Africa South Korea Hong Kong India Spain Sweden Indonesia Ireland Switzerland Italy Taiwan Japan Thailand Kazakhstan The Netherlands UAE Kenya Malaysia UK Mexico US Vietnam Mozambique Myanmar

#### **ERM GmbH**

Siemensstrasse 9 63263 Neu-Isenburg

T: +49 6102 206 0 F: +49 6102 206 202

www.erm.com