Critical Habitat Assessment, Morava Corridor Motorway Project, Serbia

Final report – Executive Summary

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Cover Photo: Image of West Morava river in Ovcar-Kablar gorge in Serbia ©Shutterstock

Executive Summary

Introduction

1. This report is the Critical Habitat Assessment for the Morava Corridor Motorway Project (the Project) in the Republic of Serbia. The Project is a 112 km motorway to be developed in the West Morava River Valley. The Project is aligning with International Finance Corporation (IFC) Performance Standards, including Performance Standard 6 (PS6) on Biodiversity Conservation and Sustainable Management of Living Natural Resources (IFC 2012).

2. This report aims to: identify Critical Habitat-qualifying biodiversity associated with the Project; update Natural and Modified Habitat mapping, including mapping Critical Habitat were possible; highlight the implications of the CHA results; and identify the recommended next steps for the Project, including identification of data gaps and the need for additional field surveys.

IFC PS6 requirements

3. PS6 makes several stipulations for Critical Habitat, including achievement of a net gain for Critical Habitat-qualifying biodiversity. A net gain is required where there are significant residual adverse impacts arising from project development. In Natural Habitat, no net loss, where possible, is required. A robust project-specific ESIA baseline is vital, followed by iterative and thorough application of the mitigation hierarchy to ensure that impacts are avoided, minimised and restored as far as feasible, reducing the significance of any residual impacts and the requirement for offsetting.

The CHA approach

4. Applying the PS6 criteria and thresholds for Critical Habitat involves the use of ecologically coherent Areas of Analysis (AoA). The area assessed for Critical Habitat is not just the direct project footprint but considers a broader landscape. This approach ensures that all important biodiversity within the project footprint and surrounding vicinity are taken into consideration. One AoA was identified which encompassed both aquatic and terrestrial areas. The AoA (7,653 km^2) was defined using a combination of water catchments, topographic information, and legally protected areas (LPA) and/or internationally recognised areas (IRA) of high biodiversity value. This precautionary approach ensures all project risks are taken into consideration and demonstrates transparency to stakeholders.

5. This CHA is based on existing documentation, including the Project ESIA and baseline studies, spatial analysis of data available through the Integrated Biodiversity Assessment Tool (IBAT), interpretation of global and regional datasets (e.g. the IUCN Red List of Threatened Species), and consultation with taxonomic expert specialists in Serbia (for plants, insects, birds, and freshwater species). Existing published and grey literature was also used where available. The list of potentially qualifying biodiversity features identified through IBAT was screened against applicable criteria and thresholds (IFC 2019). This was followed by expert consultation to determine species presence and significance where data are equivocal.

Findings of the CHA

6. The Project is found to be in Critical Habitat for six species. One freshwater species and five terrestrial species qualify under CH criteria. The Critical Habitat qualifying species (summarised in Table A below) comprise:
    - Five terrestrial species which qualify under Criteria 1 and 2. Four gastropod species (karst snails) which qualify under Criterion 2a, and one insect species (a bush cricket) qualifies under both Criteria 1c and 2a.
    - One freshwater aquatic species which qualifies for CH under Criteria 1a - a freshwater snail species (named the Striped Nerite).
    - Although they do not formally qualify as Critical Habitat, two additional species (the Noble Crayfish and the Thick Shelled River Mussel) are considered to be species of stakeholder concern.

Table A: Summary of Critical Habitat qualifying species

Scientific name	English name	Global RL status	Regional/ National RL status	Presence in AoA	IFC PS6 Criteria/Stakeholder concern
Gastropods					
Chilostoma kollari	-	LC	NE (National RL)	Unconfirmed	Criterion 2a
Xerocampylaea zelebori	-	LC	NE (National RL)	Confirmed	Criterion 2a
Macedonica frauenfeldi	-	LC	NE (National RL)	Unconfirmed	Criterion 2a
Agardhiella serbica	-	NT	NE (National RL)	Unconfirmed	Criterion 2a
Insects					
Broughtonia domogledi	Domogled Meadow Bush-cricket	NT	CR (Regional RL)	Unconfirmed	Criterion 1c Criterion 2a
Freshwater species					
Theodoxus transversalis	Striped Nerite	EN	NE (National RL)	Unconfirmed but potentially present in areas with good water quality and suitable habitat	Criterion 1a
Astacus astacus	Noble Crayfish	VU	NE (National RL)	Confirmed main stem and tributaries	Stakeholder concern
Unio crassus	Thick Shelled River Mussel	EN	NE (National RL)	Confirmed in main stem	Stakeholder concern

The biodiversity features that qualify the AoA as CH under IFC PS6, and the rationale for qualifying for Critical Habitat, are presented in Table 3 in the main report. The initial list of 27 candidate species considered in this CHA, and their rationale for exclusion is given in Appendix 3 of the main report.

7. There is currently no evidence found that suggests that the study area supports highly threatened ecosystem(s) (under Criterion 4) or key evolutionary processes (under Criterion 5).

8. No Project infrastructure is planned within any legally protected areas nor internationally recognised areas of high biodiversity value (LPA/IRA) and therefore Paragraph 20 of PS6 does not apply. While a number of LPA/IRAs overlap with or are located within the AoA, none of these areas will qualify as CH as they are unlikely to contain biodiversity features that qualify under the CH criteria.

9. **The presence of species that qualify for Critical Habitat in the AoA does not necessarily mean that the Project will impact them.** Several scenarios are possible, from impacts that are negligible, readily avoided or temporary, to those that are significant, long-term and challenging to mitigate.

10. The AoA contains Natural and Modified Habitat with some areas of Natural Habitat supporting populations of CH-qualifying species, and therefore considered to be Natural Critical Habitat (see Figure A).

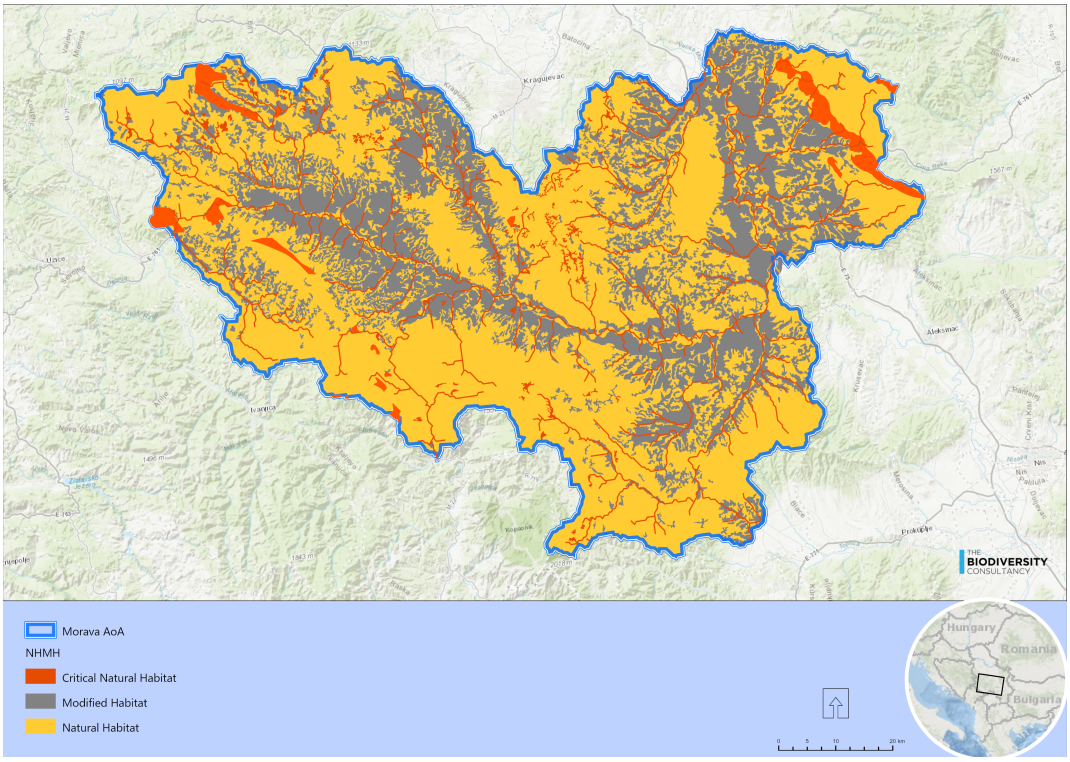

Figure A. Map of terrestrial Critical Natural Habitat, Natural Habitat and Modified Habitat in the AoA.

11. Karst limestone areas and mesotrophic pastures are terrestrial Natural Critical Habitats and the river system as aquatic Natural Critical Habitat. However, not all sections of the Zapadna Morava river system will be classed as aquatic Natural Critical Habitat as the Striped Nerite (the snail that qualifies for Critical Habitat) requires good water quality and suitable substrate. This finer scale mapping of aquatic Critical Habitat will be undertaken as part of the residual impact assessment (next steps).

Implications and next steps for the Project

12. Although there are several Critical Habitat-qualifying species in the AoA, not all are at equal risk of a Project impact. For example, the four terrestrial gastropod species are associated with a particular type of sedimentary rock containing limestone (carbonate rocks) which are found to the far east and west of the AoA. The Project's quarry sites overlap with areas of a different type of sedimentary rock containing limestone (flysch rocks); there is therefore no impact risk to the four species of terrestrial gastropod. The next steps are based on the risk of a Project impact and key information gaps to enable focused mitigation and residual impact assessment.

13. An urgent task for the Project is conduct eDNA surveys for the Critical Habitat-qualifying Striped Nerite to understand distribution in sections of the river that will be impacted by the Project. This will enable an understanding of which sections of the river these species occur in and refine mapping of aquatic Critical Habitat.

14. The CHA and eDNA surveys will inform the development of further mitigation measures and an estimation of residual impacts. A Biodiversity Action Plan (BAP) and offset strategy will be developed to enable the Project to achieve no net loss for Natural Habitat and Net Gain for Critical Habitat.