

FUTURE PROSPECTS

Pressures and threats on lenitic habitat types Spanish Metodological Approach

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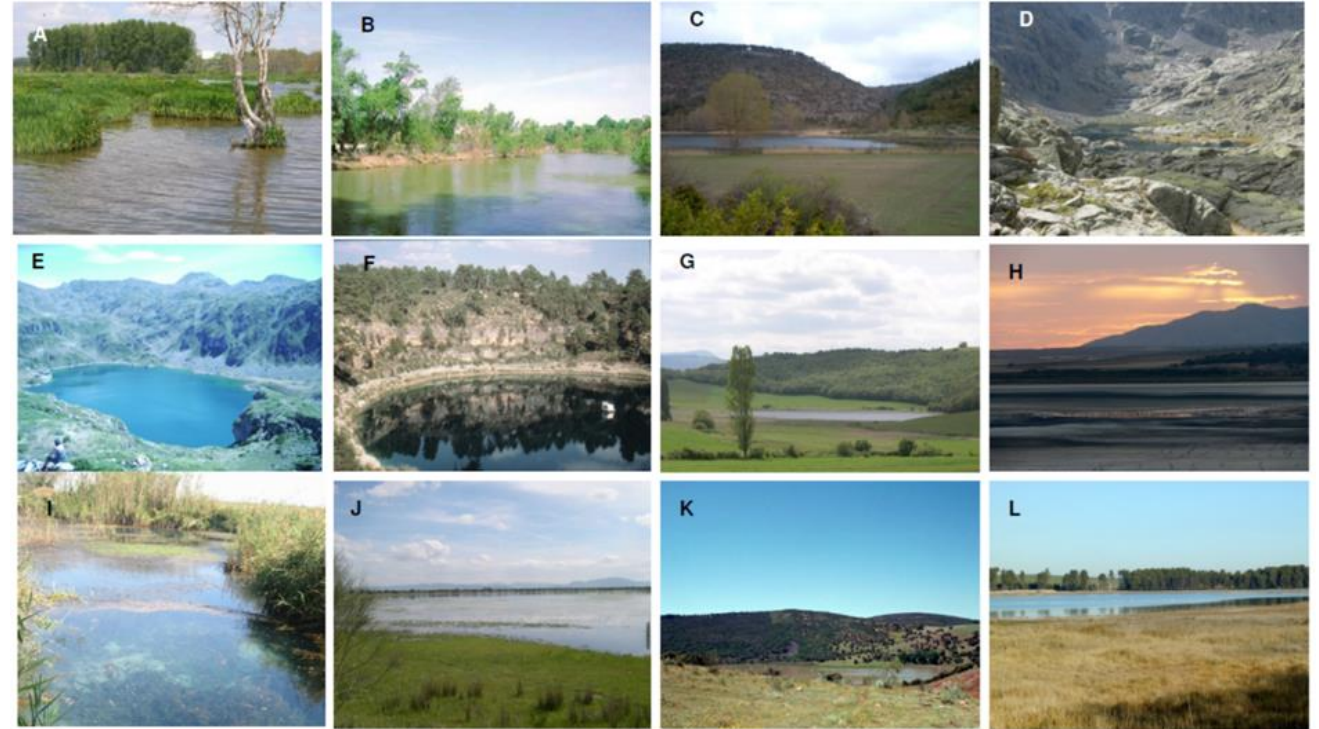
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➤ INTRODUCTION

➤ METHODOLOGY

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- The evaluation of the future prospects for the conservation of lenitic habitat types or ecosystems should be based on an assessment of the **pressures and threats** affecting each habitat type, taking into account their sensitivities to these pressures and impacts.
- The **level** of pressures and threats determines the **‘Future prospects’** parameter within the General Evaluation Matrix, which is used to assess the conservation status of Habitats of Community Interest (HTCI).



- The methodology developed by Camacho et al. (2009) for estimating the **Future prospects of lenitic HTCI** – as established in the 'Ecological Bases' project- serves as the foundation for assessing site-specific pressures and threats. This assessment contributes to the evaluation of the 'Future prospects' parameter for lenitic habitat types.
- The proposed methodology outlines a comprehensive procedure to evaluate the potential future impacts of site-specific pressures and threats on lenitic ecosystems, particularly in terms of the risk of irreversible transformation within a defined timeframe.

The interrelation among these parameters reveals a connection between the conservation status and the factors contributing to it:

- ❑ **Changes of the occupied surface area**
- ❑ **Status of the structure and function**, determined by the ECLECTIC index
- ❑ **Pressures and threats affecting the habitat or ecosystem**

This connection enables the design of appropriate measures to achieve the favourable conservation status of each HTCI, as required by the Habitats Directive.

The European Commission has compiled a **list of pressures and threats** affecting HTICs, from which those relevant to lenitic ecosystems have been selected to define the procedure for evaluating the '**Future prospects**' parameter

This methodology evaluates, in a weighted manner, the following major groups of pressures and impacts, including both direct and indirect anthropic influences:

- A. *Hydrological pressures and impacts.*
- B. *Geomorphological pressures and impacts.*
- C. *Pressures and impacts altering water quality.*
- D. *Pressures and impacts on the structure of the communities.*
- E. *Pressures and impacts due to land uses.*
- F. *Pressures and impacts by occupation of the territory to which the habitat type is linked*
- G. *Pressures and impacts due to the presence of invasive alien species.*
- H. *Other pressures and impacts.*

Each of these blocks includes several sub-sections, which are also assessed with weighted criteria based on their projected impact on the conservation status of lenitic ecosystems.

Parameters for the evaluation of pressures and threats

A - HYDROLOGICAL PRESSURES AND IMPACTS

- A1 - Occurrence of direct water extractions.
- A2 - Alteration of natural flooding regime and water flow patterns (drainage, external flow inputs, variation of flows due to exploitation or by non-natural flow inputs, climate change, etc.).
- A3 - Flow regulation in tributaries.
- A4 - Existence of drainage infrastructures.
- A5 - Extraction of water from the associated aquifer (if applicable).

B - GEOMORPHOLOGICAL PRESSURES AND IMPACTS

- B1 - Variation of the morphometry or of the characteristics of the substrate, affecting the structure or function or the wetland occupied surface (grounding, slope, construction of structures, etc.).
- B2 - Extraction of materials.
- B3 - Rubble disposal.

C - PRESSURES AND IMPACTS ALTERING WATER QUALITY

- C1 - Occurrence of intermittent urban wastewater spills.
- C2 - Specific pollutants (priority substances) spills.
- C3 - Existence of diffused pollution sources in the catchment.
- C4 - Inflows with mineralogical characteristics different to those natural.
- C5 - Thermic spills.
- C6 - Alteration of the natural chemical quality of the associated aquifer (if applicable).

D – PRESSURES AND IMPACTS ON THE STRUCTURE OF THE COMMUNITIES

- D1 - Connectivity with adjacent natural ecosystems.
- D2 - Exploitation or other pressures on the biological community.
- D3 - Uses in aquaculture.

E – PRESSURES AND IMPACTS DUE TO LAND USES

- E1 - Land uses for road and residential infrastructure.
- E2 - Occurrence of electrical lines.

F – PRESSURES AND IMPACTS DUE TO SHIFTS OF THE AREA OF THE LENITIC ECOSYSTEM OR HABITAT TYPES

- F1 - Reduction of the area occupied by the habitat type on a local scale.
- F2 - Occupation of the wetland basin or its banks.

G - PRESSURES AND IMPACTS DUE TO THE PRESENCE OF INVASIVE ALIEN SPECIES

- G1- Presence of exotic species included in the Spanish catalogue of invasive alien species.
- G2 - Presence of exotic species (alien species of the habitat type) not included in the Spanish catalogue of invasive alien species.

H - OTHER PRESSURES AND IMPACTS

- H1- Solid wastes.
- H2- Livestock overload.
- H3- Recreational activities.
- H4- Other pressures and impacts (e.g. periodical vegetation burning).

After evaluating all sections and sub-sections for each site, the scores from the assessment of pressures and threats are summed, and the site is assigned an overall level based on the following ranges:

LOW	0 - 20 points. The lenitic ecosystem with which the habitat type is associated does not suffer sufficiently enough pressures and impacts to jeopardise its future maintenance.
MEDIUM	21 - 50 points. The lenitic ecosystem with which the habitat type is associated is subject to sufficiently significant pressures and impacts that may lead to moderate declines in ecological quality over the medium to long term.
HIGH	51 - 75 points. The lenitic ecosystem with which the habitat type is associated is subject to very significant pressures and impacts, which may lead to severe degradation of its ecological quality or even its destruction in the medium term.
VERY HIGH	> 75 points. The lenitic ecosystem with which the habitat type is associated is under very strong pressures and impacts that, if they persist, are likely to lead to its destruction in the short term.

Representativeness criteria, such as those described by Camacho et al., can be employed to extrapolate site-level results to the entire biogeographical region for each habitat type or ecosystem. These criteria support both the extrapolation of ECLECTIC index outcomes ('Structure and functions' parameter) and the identification of key sites for long-term monitoring.

In the absence of a standardized global scaling framework, it is advisable to extrapolate results using surface area weighting. This approach yields a weighted average based on the contributions of each habitat type or ecosystem site where *future prospects* have been assessed during the six-year evaluation period. The outcome is an integrated result that reflects the relative importance of pressures and threats within each site.

- ☐ **Values not exceeding 20** –corresponding to low levels of pressure and impact- would indicate a *favourable* conservation status of the habitat type or ecosystem.
- ☐ **Values greater 20 but no exceeding 50** –representing an intermediate level of pressure and impact- would correspond to an *unfavourable-inadequate* status.
- ☐ **Values equal or greater than 51** –indicating high to very high levels of pressure and impact- would reflect an *unfavorable-bad* conservation status.

Additionally, the regional evaluation procedure will also follow the basic criteria associated to the General Evaluation Matrix.

Criteria for Selecting Sites for Monitoring Proposal

1. Statistical significance
2. Extension/scale
3. Representation in the Natura 2000 Network
4. Representation in protected area networks (See criterion 3)
5. Threat status (risk of disappearance) and conservation status
6. Reference ecosystems
7. Ecological significance and national-community uniqueness
8. Environmental-ecological diversity
9. Existing information
10. Distance to other monitoring points
11. Representativeness of Autonomous Communities (CCAA) (See criterion 10)
12. Accessibility and representativeness of the plots (sites)

References

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Thank you for the attention

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Salburúa Wetland (Álava, subtipo 1.3.2.1.1). Source: Diputación de Álava.

