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Green Economy in Eastern Partner Countries

Methodological Approach and Experience in Developing Management Plans for the Emerald Network Sites in Moldova

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Policy and Institutional Context

Implemented under EU4Environment Result 4.1 led by the World Bank

Emerald Network = Bridge from Bern Convention to Natura 2000

According to the Country Work Plan (CWP), the Bank assisted the GoM/MoE in developing three model Management Plans:

Emerald Site Nistrul de Jos (SENJ) – wetland & mosaic type

Emerald Site Codru (SEC) – forest type (Central European broadleaved forest)

Emerald Site Vrancești Steppe (SESV) – steppe & partially wetland type

Main goal: establish **replicable models** for the entire Emerald Network in Moldova

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Context and Motivation

- 61 adopted Emerald sites (277 157 ha or 8.1% of territory)
- 27 habitats & 163 species of European importance
- sufficiency index 24%
- Target (2030): 11% coverage and 80% sufficiency
- Only 46% of sites currently have management plans

The task of the WB under the EU4Environment was to create a standardized & science-based methodology to help move forward

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Purpose of involvement

- Develop evidence-based & adaptive plans compatible with Bern Resolutions 4 & 6 and EU Habitat Directives
- Integrate ecological data, spatial planning and economic feasibility
- Transform policy commitments into operational, site-level management tools
- Provide a template for future Natura 2000 integration

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Methodological Framework

Core elements of the approach:

- Diagnostic assessment (SDF review + field verification)
- Definition of Conservation Objectives (OSC)
- Ecological zonation and planning per habitat type
- Costed Action Plan (2026–2035)
- Monitoring & adaptive management cycle

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ES designing Process (2023 – 2025)

- 1) Baseline review and GIS screening of SDFs
- 2) Field verification and species/habitat updates
- 3) Habitat re-typing and EUNIS cross-mapping
- 4) Threat/pressure analysis
- 5) Drafting and consultations (with all interested)
- 6) Final approval and integration by MoE

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Innovations Introduced

- Functional ecological perimeter concept to propose corrections in SDF area discrepancies (TBC by the MoE)
- Unified template for all ecosystem types
- EUNIS to Natura 2000 crosswalk for habitat codes
- GIS for monitoring ecological change
- Additional expertise
- Participatory validation
- Costed Action Plans with phasing and responsibilities

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Case Study 1: ESNJ (Wetland Complex – Lower Nistru)

Parameter:

Details:

Verified area

11193 ha 12 isolated areas (vs 59200 ha in SDF)

Dominant habitats

C3.2 reedbeds, E3.4 wet meadows, G1.1 riparian forests

Main pressures

Drainage, invasives (*Acer negundo*, *Ailanthus altissima*),
pasture pressure

Key actions

Hydro-ecological restoration, connectivity corridors,
reedbed management

Budget

€3.4 million (2026–2035)

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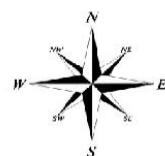


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Case Study 1: ESNJ (Wetland Complex – Lower Nistru)

Key ESNJ Habitats and the
Boundary of the National Park
Nistrul de Jos:

- **11193.4 ha** technical planning and the GIS-based monitoring (operational boundary)
- **59200 ha** formally adopted area (SDF)
- **12 core sectors (habitats)** are valuable critical remnants of a once extensive wetland area in the historical Lower Dniester wetland complex

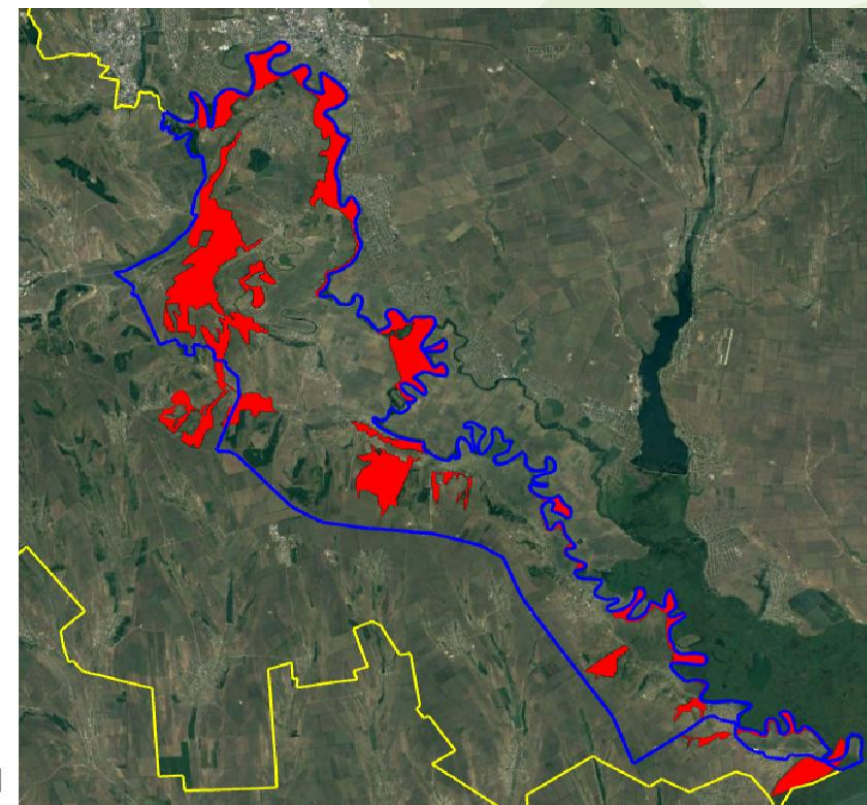


Legend

- █ Emerald site Nistrul de Jos
- █ National Park Nistrul de Jos

0 10 20 30 40 KM

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Case Study 1: ESNJ

Grădina Turcească (Turkish Garden)
(46°40'29.38"N; 29°36'47.80"E)



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Case Study 2: Emerald Site Codru (SEC) (Forest type)

Parameter:

Details:

Area

6498 ha (including NR Codrii 5172,2 ha)

Dominant habitats

Oak–hornbeam and beech assemblages (G1.A1, G1.6)

Pressures

Illegal logging, over-grazing, invasives (*Robinia pseudoacacia*, *Ailanthus altissima*, *Acer negundo*)

Actions

Close-to-nature silviculture, game management, restoration corridors

Budget

€ 1.35 million (2026–2035)

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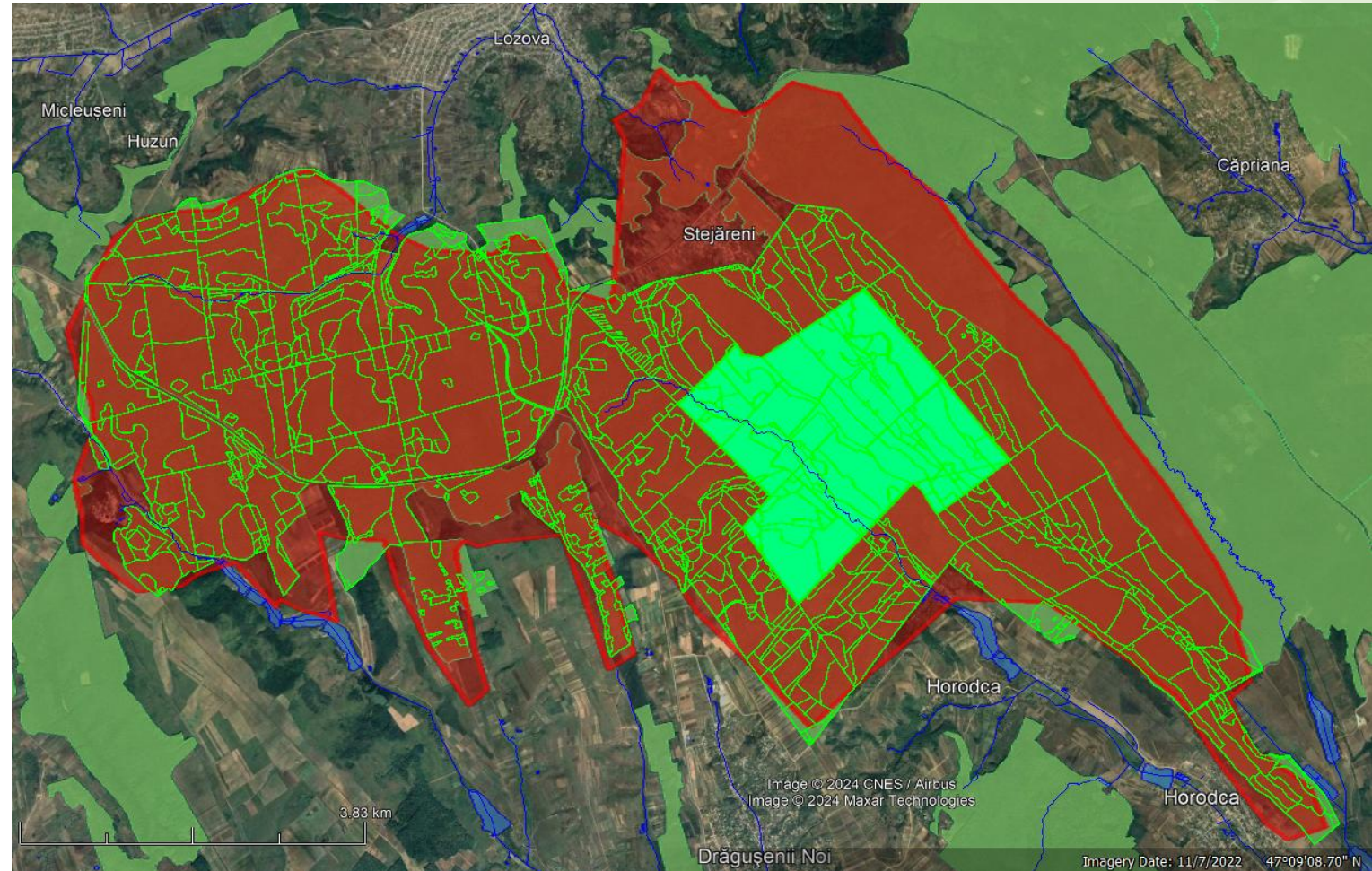


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Case Study 2: Emerald Site Codru (SEC)

General map of the SEC:

- **Strict protection zone (core area) (Zone A) – 723 ha**
- **Buffer zone (Zone B) – 4,449.2 ha**
- **Transition zone (Zone C) – approximately 12,300 ha**



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Case Study 2: Emerald Site Codru (SEC)

The black woodpecker
(*Dryocopus martius*) is the
largest woodpecker in
Europe





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Case Study 3: Emerald Site Steppe Area Vrancești (SESV)

Parameter:

Area

Re-classification

Key (factual) habitats

Key flora

Pressures

Actions

Budget

Details:

147 ha (potential [and need for] for expansion)

from D4.1 mires → E6.222 Sub-Pannonian halophilous steppe
(= 1530 Natura 2000)

Halophilous steppe + temporary wet meadows (E3.4, C3.2)

Stipa spp., *Adonis vernalis*, halophytes

Illegal logging, over-grazing, invasives (*Robinia pseudoacacia*,
Ailanthus altissima, *Acer negundo*)

Rotational pasturing, native grass reseeding, invasive control

€ 0.265 million (2026–2035)

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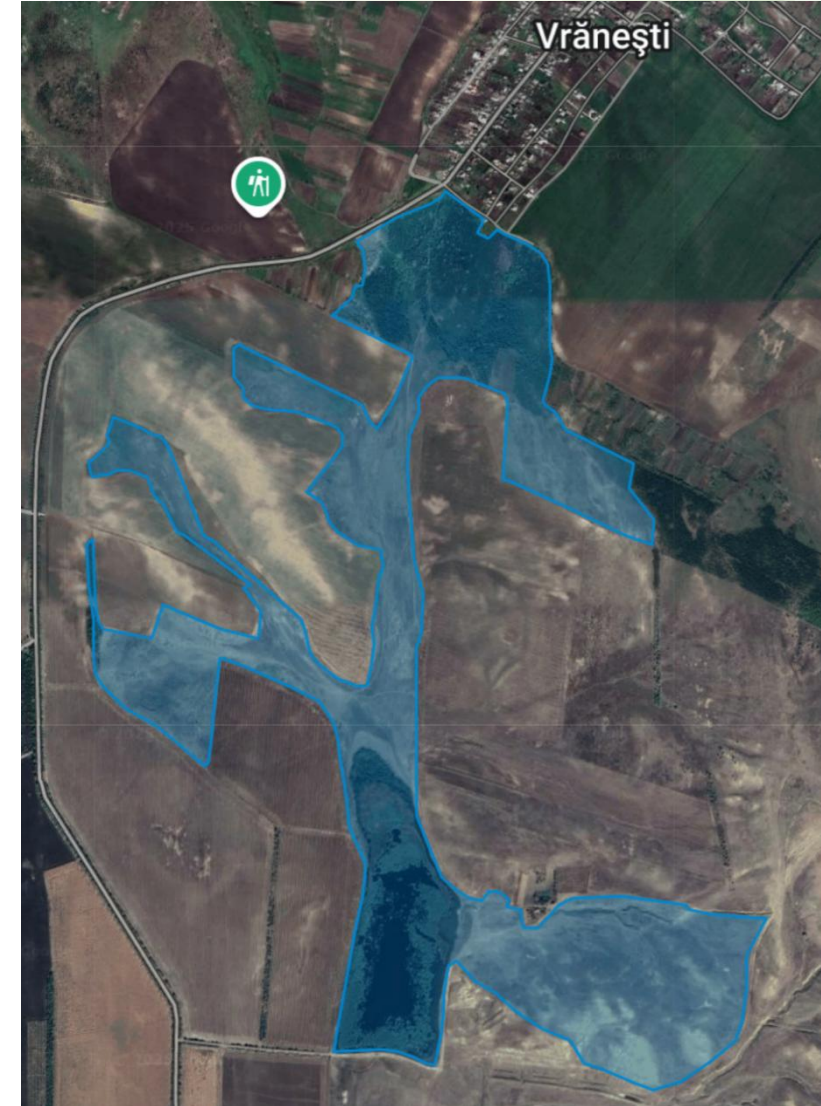
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Case Study 3: SESV

The European
fire-bellied toad
(*Bombina
bombina*)



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Cross-Site Challenges

Category:

Data
Habitat Typology
Species
Governance
Finance
Socio-ecological

Observed Issue:

SDF boundaries vs ecological reality (e.g. SENJ)
Outdated codes / misclassified units (e.g. SESV)
Incomplete inventories (e.g. SEC)
Fragmented datasets between MoE, Moldsilva, ICAS
Limited budget forecast and donor alignment
Competing land uses and grazing pressure

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Solutions and Innovations

Challenge	Solution	Outcome	Example
Area mismatch	Functional ecological perimeter	Accurate management unit	SENJ
Habitat errors	Re-typing under EUNIS 2022	Valid classification	SESV
Species gaps	Expert validation & monitoring	Reliable biodiversity data Unified baseline for MoE & WB	SEC All
Fragmented data	Integrated GIS database		
Lack of monitoring	Annex 10 indicator protocol	Natura 2000-ready reporting	All

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Cross-Cutting Lessons Learned

- Standardization enables replication nationally and regionally
- Field verification is crucial for data credibility
- Adaptive management links science and policy
- Stakeholder participation creates ownership
- Financial phasing ensures realistic implementation

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Results and Outputs (2025)

- 3 Management Plans covering > 18 000 ha under EU4Environment pilot
- 33 priority measures costed and sequenced
- 3 Local Advisory Groups operational
- > 150 stakeholders consulted across 8 districts
- Templates and protocols ready for replication and GEF-8 use

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Scalability and Conclusions

- Methodology to feed into GEF-8 REMAP & TerraMoldova projects
- Basis for future Natura 2000 alignment and EaP regional transfer
- Demonstrates how data discrepancies can be turned into policy learning
- Three ecosystems — one methodology — shared vision

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