



GREEN PATH PUBLICATIONS

SEDI Assessment Report

Czech Republic

Seasonal Ecological Debt Index (SEDI) — National-Level Methodology Pilot

ASSESSMENT YEAR

2025

GEOGRAPHICAL BOUNDARY

National territory of the Czech Republic

METHODOLOGY VERSION

Pilot v0.1

ASSESSMENT STATUS

Completed

OVERALL SEDI SCORE

Not Calculated

NON-GOVERNANCE DATA COVERAGE

60.28%

ASSESSMENT CONFIDENCE

60 / 100 — Medium



Key Results at a Glance

OVERALL SEDI SCORE

Not Calculated

Classification	Not assigned
Non-Governance Coverage	60.28%
Assessment Confidence	60 / 100 — Medium
Calculable Non-Gov Dimensions	3 of 5

MOB — Tourism & Mobility

Calculable — Yes

WAW — Waste & Water

Calculable — Yes

ENE — Energy, Emissions & Air

Calculable — Yes

LBD — Land, Ecosystems & Biodiv.

Not calculable

SOC — Socio-cultural Load

Not calculable

GOV — Governance & Data Transp.

Under audit

The system **correctly withheld an overall score** because available evidence did not satisfy the methodological publication threshold — not because the country performs poorly.



Executive Summary

The 2025 Czech Republic assessment is the **first application of SEDI across an entire national territory** — a test of whether a framework proven at destination level could produce a methodologically defensible national assessment. The result is significant precisely because **no overall score was produced**.

SCORE

Not calc.

CLASSIFICATION

Not set

COVERAGE

60.28%

CONFIDENCE

60_{/100}

Three of five non-governance dimensions (MOB, WAW, ENE) produced calculable pressure results; LBD and SOC did not. Under SEDI Pilot v0.1, insufficient compatible evidence was available to produce a representative national score — yet the calculable dimensions yielded robust findings.



Calculable Dimension Results

Several dimensions produced robust, meaningful findings even though no overall score was published.

DIMENSION	PRESSURE	COVERAGE	STATUS
MOB — Tourism & Mobility Pressure	33.28 / 100	85%	Calculable
WAW — Waste & Water Pressure	22.22 / 100	55%	Calculable
ENE — Energy, Emissions & Air	52.37 / 100 *	75%	Calculable / audit note
LBD — Land, Ecosystems & Biodiversity	—	30%	Not calculable
SOC — Socio-cultural Load	—	25%	Not calculable
GOV — Governance & Data Transparency	Under audit	50%	Derived indicators incomplete

* **ENE** contains a technical sign inconsistency for ENE-01, discussed transparently later in this report. The underlying platform export records these dimension results directly.



How to Read This Assessment

"SEDI evaluates pressure, not virtue."

A high score does **not** mean a country is irresponsible; a low score does **not** mean management is complete. For this national pilot, consider four things together:

Pressure

What measurable environmental or socio-economic pressure was identified?

Coverage

How much of the methodology could be populated with defensible evidence?

Confidence

How strong and methodologically compatible was the evidence?

Applicability

Did the indicator translate from destination scale to national scale?

Applicability proved particularly important in Czechia — the retention of the existing indicator architecture let the national application itself test methodological compatibility.



Assessment Boundary

ASSESSMENT

Czech Republic

REFERENCE YEAR

2025

BOUNDARY

National territory

FRAMEWORK

Seasonal Ecological Debt Index

METHODOLOGY

Pilot v0.1

STRUCTURE

Retained - unchanged

The assessment examines six SEDI dimensions:

MOB

Tourism & Mobility

Mobility pressure

WAW

Waste & Water

Waste & water pressure

ENE

Energy, Emissions & Air

Energy & air pressure

LBD

Land & Biodiversity

Ecosystems & biodiversity

SOC

Socio-cultural Load

Socio-cultural load

GOV

Governance & Data

Data transparency



Overall Assessment Result

CENTRAL RESULT OF THE PILOT

SEDI Score: Not Calculated

CLASSIFICATION

Not assigned

OVERALL CALCULABLE

False

NON-GOV COVERAGE

60.28%

OVERALL CONFIDENCE

60 / 100

SEDI did **not assign an artificial score** to compensate for missing evidence. **Three** non-governance dimensions produced calculable pressure results; **two** did not. The evidence threshold required to represent Czechia through one national number was therefore not met.

This report presents the findings that can be supported and explicitly marks those that cannot.



MOB — Tourism & Mobility Pressure

Strongest-covered non-governance dimension — four of five indicators produced usable values.

PRESSURE SCORE 33.28/100	COVERAGE 85%	STATUS Calculable
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MOB-01	Overnight stays per resident 59.1m stays ÷ 10.9m residents = 5.41 nights/resident	Complete
MOB-02	Peak-season concentration July-Sep = 35.87% of annual stays (21.2m of 59.1m)	Complete
MOB-03	Sustainable local mobility share Walk 35.4% + cycle 4.5% + PT 20.2% = 60.06% · survey from 2017–19	Complete
MOB-04	Motor-vehicle intensity 625 passenger vehicles per 1,000 residents	Complete
MOB-05	Seasonal congestion increase No representative national peak-vs-baseline congestion value	Unavailable

Takeaway: national tourism intensity is relatively low, though the average can conceal higher pressure in Prague and tourism-intensive areas. City congestion data cannot defensibly represent the whole country.



WAW — Waste & Water Pressure

Two directly scored indicators — others limited by seasonal granularity or proxy issues.

PRESSURE SCORE

22.22/100

COVERAGE

55%

STATUS

Calculable

WAW-01

Peak-season water exploitation (WEI+)

Max seasonal WEI+ = **4.1%** in Q3 · low national pressure

Complete

WAW-02

Peak-season water-consumption increase

No representative national monthly consumption series

Unavailable

WAW-03

Municipal waste reused / recycled

Harmonised Eurostat value = **43%**

Complete

WAW-04

Peak-season waste increase

Waste data are annual only — no monthly peak comparison

Unavailable

WAW-05

Population-eq. on compliant treatment

Proxy: **97.6%** treated — excluded from score for integrity

Proxy / excluded

Note: treatment share (97.6%) cannot prove the same percentage of population-equivalent satisfies every regulatory requirement — so WAW-05 is preserved as evidence but not used in the WAW score.



ENE — Energy, Emissions & Air

Three usable indicators — with one important platform discrepancy to disclose.

PRESSURE SCORE

52.37/100 provisional

COVERAGE

75%

STATUS

Calculable · review req'd

ENE-01

Peak-season electricity demand

Calculator: **-14.30%** · platform result: **+14.30%** (sign issue)

Audit note

ENE-02

Renewable share of electricity consumed

19.2% gross consumption · identified pressure driver

Complete

ENE-03

Annual mean PM_{2.5}

National monitoring average = **11.9 µg/m³**

Complete

ENE-04

Low-emission visitor access share

No compatible national visitor-arrival modal split

Unavailable

Reporting treatment: the source calculation of -14.30% is retained as the assessment finding; the exported score of 52.37 is **provisional pending correction** of the sign-handling issue. This report does not silently rewrite the underlying JSON.



LBD — Land, Ecosystems & Biodiversity

Only one indicator produced a usable value — the dimension did not meet the coverage threshold.

PRESSURE SCORE

—

COVERAGE

30%

STATUS

Not calculable

LBD-01

Five-year growth in artificial / sealed land
Copernicus data exist but no exact national five-year result

Unavailable

LBD-02

Accessible urban green space per resident
No defensible national public-access m²/resident value

Unavailable

LBD-03

Sensitive sites in good / improving condition
19.4% favourable status · conservative proxy

Proxy

LBD-04

Peak visitor load vs managed capacity
No consistent national load-to-capacity denominator

Unavailable

Rule applied: no defensible raw value = no proxy score. LBD-03 (19.4%) uses the Article 17 favourable-status share as a conservative proxy; its reporting cycle is older and must be interpreted cautiously.



SOC — Socio-cultural Load

Only SOC-03 produced a usable numerical value — the dimension did not meet the coverage threshold.

PRESSURE SCORE —	COVERAGE 25%	STATUS Not calculable
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SOC-01	Short-term rental bedspaces per 100 residents No harmonised national unique registered STR denominator	Unavailable
SOC-02	Peak daily visitors per resident No verified national single peak-day visitor population	Unavailable
SOC-03	Residents reporting tourism acceptable/beneficial 86% non-negative · ~35,000 respondents 2022–24 · very high confidence	Proxy
SOC-04	Peak-to-low tourism employment variation Insufficient consistent monthly tourism-employment resolution	Unavailable

Method note: SOC-03 used **100% – 14% negative = 86%** as a proxy for acceptable-or-better resident sentiment. The distinction between **acceptance** and **active support for more tourism** must remain explicit.



GOV — Governance & Data Transparency

Requires final derived calculation — GOV-01 and GOV-02 depend on the completed assessment itself.

EXPORTED PRESSURE

100 · do not read as performance

COVERAGE

50%

STATUS

Derived indicators incomplete

GOV-01

Required data publicly available
11 of 22 non-gov indicators usable → **initial 50%** rate · derived after audit

Temporary

GOV-02

Indicators updated within reporting cycle
Limits: MOB-03 survey 2017–19 · LBD-03 Article 17 2013–18

Temporary

GOV-03

Active destination sustainability action plan
Tourism Development Strategy 2021–30 + Action Plan 2024–25 · max evidence

Max evidence

GOV-04

Public performance reporting
75/100 structured evidence · no single integrated annual report

Assessed 75

Export audit: GOV-03 and GOV-04 are recorded in the JSON as **1.0 and 7.0** respectively. These are implementation issues to be corrected before automated governance scoring — not a claim that Czech governance equals 7%.



What the Valid Evidence Shows

Relative strengths — findings sufficiently supported even without an overall score.

Low national water exploitation

The **4.1% seasonal WEI+** result suggests relatively low national water-exploitation pressure.

Moderate tourism seasonality

35.87% of annual registered overnight stays fell in the highest-volume three-month period.

Positive resident sentiment

The resident-attitude proxy indicates **86%** of respondents were non-negative toward tourism development.

Strong governance architecture

A national **2021–2030 tourism strategy** with action plans, responsibilities, indicators and public evaluation.



Areas Requiring Attention

Measurable pressures identified in calculable indicators.

Renewable electricity share

At **19.2%**, renewable electricity consumption remains substantially below the SEDI best benchmark — one of the strongest measurable pressure drivers.

Motor-vehicle intensity

Approximately **625 passenger vehicles per 1,000 residents** indicates substantial structural private-car dependence.

Habitat conservation condition

Only **19.4%** of assessed habitats were in favourable conservation status under the evidence used — requiring careful proxy interpretation.

Municipal waste recycling

The harmonised **43%** recycling / preparation-for-reuse result is an area where further progress is possible.



Data Availability Findings

A · Temporal granularity missing

WAW-02 (monthly water consumption) · WAW-04 (monthly waste) · SOC-04 (monthly employment).

B · Geographic aggregation problem

MOB-05 (city congestion cannot represent the country) · LBD-02 (urban green space, no national metric).

C · Requires a site-level denominator

LBD-04 — peak visitation exists but no harmonised national ecological carrying-capacity denominator.

D · Tourism population definition

SOC-01 (STR bedspaces) · SOC-02 (peak-day visitors) · ENE-04 (visitor modal split).

E · Data exist but no verified raw result

LBD-01 — Copernicus artificial-sealing data exist, but the required national five-year raw result could not be calculated defensibly.

Unavailable does not mean the country does not collect data. In several cases substantial data exist; the limitation is that they do not map precisely enough onto the current indicator definition to support a defensible raw value.



Coverage & Assessment Confidence

NON-GOVERNANCE WEIGHTED COVERAGE

60.28%

of methodology populated with defensible evidence

OVERALL CONFIDENCE

60/100

Medium

A final SEDI number without adequate coverage would create an impression of precision unsupported by the evidence, so the methodology **withheld the national score** rather than filling gaps with assumed values. This is why SEDI publishes coverage and confidence alongside results — a sustainability index should disclose both **what it knows** and **what it cannot yet measure responsibly**.



Integrity & Technical Audit Notes

The exported JSON must be preserved as the original Pilot vo.1 audit record — inconsistencies corrected at platform level, not silently rewritten.

ITEM	ASSESSOR VS. EXPORTED RESULT
ENE-01	Assessor calculation -14.30% vs exported +14.30% — sign issue affects automated ENE result.
WAW-05	Detailed answer holds a 97.6% proxy ; final result block excludes it / marks unavailable.
LBD-03	Detailed notes describe the value as a proxy ; result block records status as complete.
SOC-03	Detailed notes describe an 86% derived proxy ; result block records the indicator as complete.
GOV-03/04	Structured values exported as 1.0 and 7.0 , despite logic representing a maximum GOV-03 result and a 75-point GOV-04 result.
Meta	Export label "Demo Organization" is a technical environment field and must not replace Green Path Alliance as assessor/publisher.

Publication principle: where the platform export and the assessor calculation differ, both are disclosed rather than silently corrected in the historical record.



Priority Improvement Pathway

Practical directions supported by the current assessment — without pretending to provide a complete national ecological-debt ranking.

Short Term

- ✓ Maintain strong national tourism monitoring
- ✓ Update mobility data with the 2025–26 travel study
- ✓ Increase renewable electricity & grid integration
- ✓ Reduce PM₂₅ exposure, target air-quality hotspots
- ✓ Strengthen municipal waste recycling & reuse
- ✓ Preserve regular resident-sentiment monitoring

Medium Term

- ✓ National seasonal data: water, waste, employment
- ✓ Visitor transport-mode & peak-day datasets
- ✓ Short-term-rental capacity statistics
- ✓ Link wastewater treatment to compliant population-equivalent capacity
- ✓ Connect data across institutions and scales

Long Term

- ✓ Spatially disaggregated monitoring of where pressure concentrates
- ✓ Integrate tourism, mobility, ecosystems, infrastructure & residents
- ✓ Publish against national sustainable-tourism strategy & environmental outcomes
- ✓ Enable reproducible periodic reassessment



Transparency Statement

This assessment deliberately distinguishes between **complete evidence**, **proxy evidence**, **unavailable evidence** and **technical platform inconsistencies**.

No fabricated coverage. No unavailable indicator was assigned an estimated raw value solely to increase coverage.

No forced approximation. Where an approximation could not be defended, the indicator remained unavailable.

Related but not equivalent. Where evidence was related but not equivalent to the SEDI definition, the methodological difference was documented.

Disclosed discrepancies. Where the platform export and the assessor calculation differ, both are disclosed.



Principal Data Sources

Drawn from public evidence of Czech, European and international institutions.

CZ

Czech Statistical Office (CZSO)

Stays, population, seasonality, accommodation, waste, water, tourism employment.

CD

CDV / Česko v pohybu

National modal split — walking, cycling, public transport share.

CH

Czech Hydrometeorological Institute (ČHMÚ)

Annual mean PM_{2.5} & national air-quality monitoring.

EU

Eurostat & Copernicus

Harmonised waste recycling; renewable share; artificial-sealing data.

CT

CzechTourism / Tourdata

Resident sentiment, GSM visitor monitoring, performance reporting.

TT

TomTom Traffic Index

City congestion (supporting only) — not used for a national MOB-05 value.

MT

Ministry of Transport

Central Vehicle Register & national vehicle stock.

ER

Energy Regulatory Office (ERÚ)

Monthly 2025 electricity consumption; ENE-01 peak-vs-non-peak basis.

EA

European Environment Agency (EEA)

Seasonal Water Exploitation Index Plus & water scarcity.

BI

BISE / EU Habitats Art.17

Conservation status of Czech habitats (19.4% favourable).

MR

Ministry for Regional Development

Tourism Development Strategy 2021–30 & Action Plan 2024–25.

The JSON preserves direct evidence links for multiple indicators, including the unofficial electricity report underlying ENE-01.



How to Cite & Disclaimer

How to cite this assessment

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Disclaimer

The Seasonal Ecological Debt Index is a **transparent decision-support methodology** based on publicly available, submitted and independently verifiable data.

- **Not** a legal, regulatory or governmental determination.
- Where more accurate current compatible data become available, Green Path Alliance may update the assessment through a documented revision process.
- This Czech assessment is a **national-level methodology pilot** — **no overall SEDI score is published** because coverage and calculability requirements were not satisfied.



GREEN PATH PUBLICATIONS

SEDI Assessment Report — Czech Republic 2025

*The pilot did not produce the number it was designed to calculate.
It produced something equally important: **a transparent record of what can currently be measured reliably — and what cannot.***

It establishes a documented national baseline of evidence, identifies measurable tourism and environmental pressures, highlights areas of resilience, exposes data gaps, and creates a reproducible record for future reassessment.

SEDI does not ask readers to trust a score — it provides the information required to understand whether a score can responsibly be produced at all.