

Enabling LCA at Scale

The ecoinvent API

July 24, 2026

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93rd LCA Discussion Forum | July 7th, 2026 | ETH Zurich



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Agenda

- 01 ecoinvent -trusted data for sustainability decisions
- 02 Our vision for the data distribution domain
- 03 The challenge
- 04 The ecoinvent API
- 05 Outlook

Trusted data for sustainability decisions

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No data, no net zero



1

The transition is accelerating

Net zero targets are no longer aspirational — they are legal and commercial commitments.

2

The stakes have changed

Sustainability data has moved from a niche application to a business-critical input.

3

Not all data is created equal

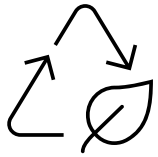
Free data is multiplying. The question is no longer whether you have data, but whether you can trust it.

The consequences of data failure are now too significant for organizations to chance.

What is ecoinvent?

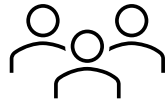


ecoinvent is the non-profit behind the world's most widely used and transparent environmental database.



Mission-driven

Our mission is to enable people and organizations to make science-based, data-driven sustainability decisions.



Independent non-profit

Our independence is built into how we are governed and funded. It's the foundation for the trust our users place in our data.



Quality is our north star

We assure data quality through peer review, transparent documentation, and a track record of regular annual updates for over a decade.

Our data gives organizations confidence to make sustainability decisions they can defend.

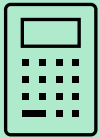
What does ecoinvent do?



We provide the data that sustainability decisions are built on.

For over two decades, we have built and maintained a **lifecycle inventory database** that now includes **26,000+ datasets**.

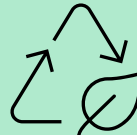
Our data spans every major sector and geography, with new content added regularly. We cover all **16 environmental impact categories** recognized by the EU PEF method, and expanding use cases.



Corporate carbon
accounting



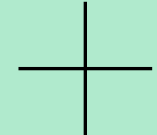
Life cycle
assessments



Ecodesign

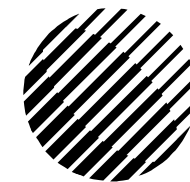


Product carbon
footprints

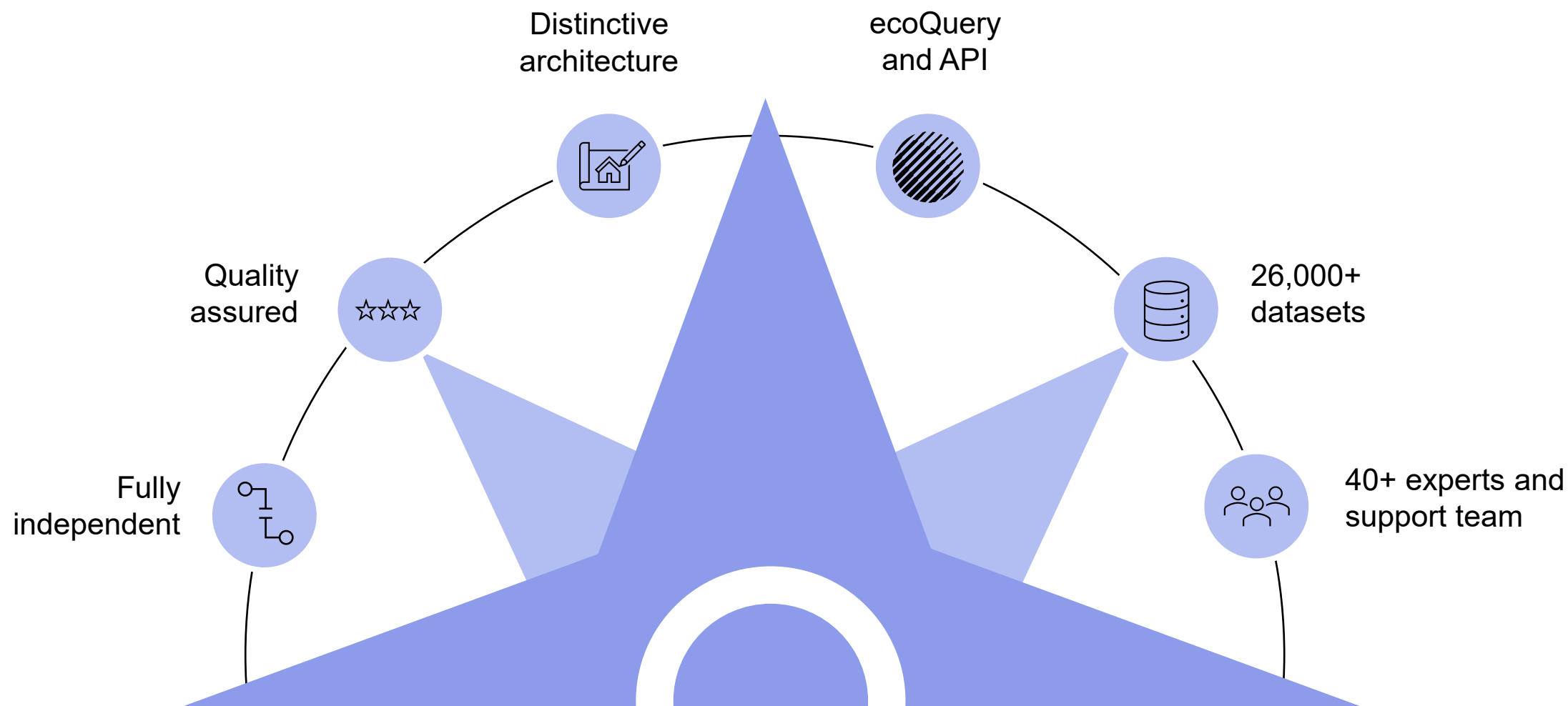


Supply chain
optimization

How are we different?



Data quality is our north star.



02 Our vision for data distribution



Easy to discover, access and use



***ecoinvent** makes it **easy** to **discover**, **access**, and **use** **sustainability data at scale** through three complementary distribution channels—ecoQuery, database files, and API.*

What does that mean?



Discover

Find the right dataset among thousands of options

Access

Get fast access to data through any channel (ecoQuery, API, Database files)

Use

Integrate ecoinvent data into your workflows without friction

03 The challenge



The challenge



The pain

- Time consuming integrations
- Struggles with loading XMLs
- Slow scaling
- Challenge to identify quickly differences between ecoinvent versions

The need

- “Hi! Is there an API available if we want to quickly update our emission factors to ei3.11? Ecoinvent”
- “Is there a possibility, to access product properties through an automated way, for example through an API or otherwise?”
- “We are planning to develop an internal tool for LCA. Using the development license, 1) Are we able to directly fetch the ecoinvent API? “

04 The ecoinvent API



Overview & capabilities

An interface to the world's most trusted LCA database



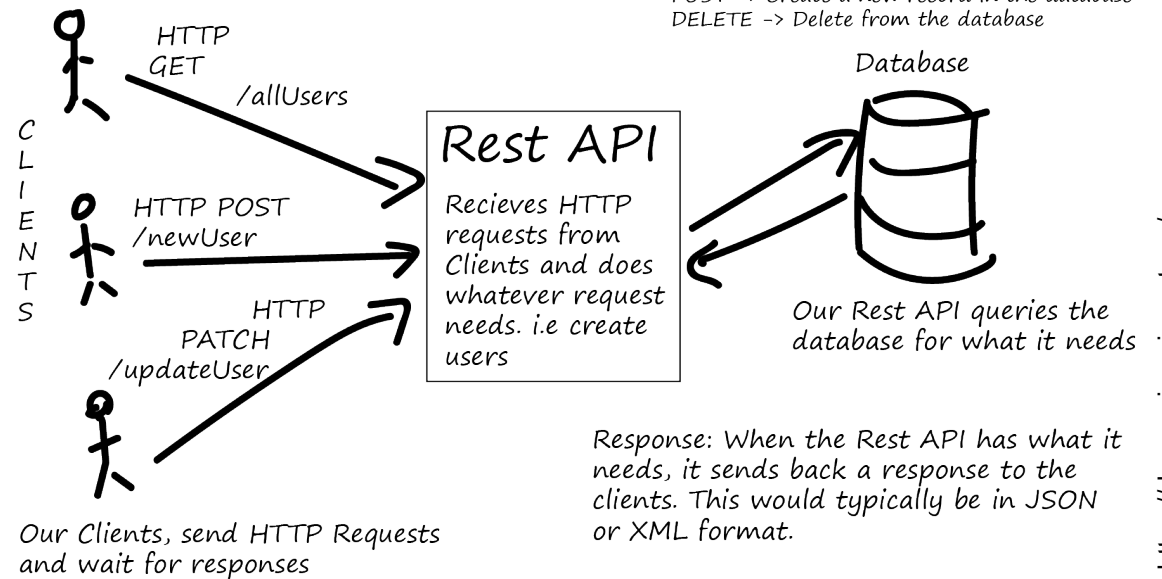
A RESTful interface to the ecoinvent database

Enables developers to integrate environmental impact data directly into their own software and tools — no manual file downloads required.

What customers can do:

- Access 26,000+ datasets
- Retrieve impact scores from 600+ indicators
- Extract up to 1000 datasets simultaneously
- Search using free-text or semantic queries
- Filter by sector, geography, activity type

Rest API Basics



From static files to live infrastructure



Data Files (existing)

- Delivered as XML (or excel download)
- Manual, one-time retrieval
- Time consuming integration
- Static until re-downloaded
- Limited scalability — requires manual processes
- Full database exported to customer

API (new)

- Live programmatic calls over HTTP
- Automated, real-time integration
- Fast access to new versions
- Always up to date
- Scales with the customer's product
- Scoped access — dataset and indicator packages apply

Six endpoints. One integration. Continuous access.



GET /versions

Available database versions, system models, and release dates

GET /datasets

Free-text or semantic search across the full catalogue with filters (sector, geography, activity type)

GET /indicators

LCIA methods available in the customer's license, grouped by method → category → indicator

GET /datasets/{id}

Full metadata + optional impact scores for a single dataset

POST /datasets/batch

Up to 1,000 datasets with impact scores in a single call — the key enabler for large-scale platforms

POST /reports

Contractual usage reporting — required every time ecoinvent data is delivered to an end customer, even when served from cache



Making automated LCA reliable

- Versioned API
- Delegated Authentication
- Service status monitoring
- Release notes and changelog with every new API release



Free Trial

A risk-free way to evaluate the API

Duration: **4 weeks**

- Identical functionality to the production API
- Sample (placeholder) impact scores — no real data, not for production use
- Evaluate capabilities, test integrations, prototype applications

05 Outlook



Overview & capabilities

What we're building next



Automated mapping of materials to datasets

THE PAIN

Map bulk of materials with the right datasets

WHAT WE'RE BUILDING

Automated mapping of materials to datasets

THE GAIN

Mapping materials takes hours instead of minutes and the outcome is highly reliable

Report of changes between versions

THE PAIN

Get an overview of changes that happened between ecoinvent versions

WHAT WE'RE BUILDING

Precise reporting on changes that happened between versions

THE GAIN

Easy identify changes and adjust your calculations. No more manual re-validation of version upgrades

Data comparison within a version

THE PAIN

Decide among thousands of datasets which ones to use for your use case

WHAT WE'RE BUILDING

Dataset comparison within a version

THE GAIN

Faster & confidently decide which datasets suit best your use case

Database in JSON format

THE PAIN

Time consuming and challenging data ingestion

WHAT WE'RE BUILDING

The whole database in JSON format

THE GAIN

Compact, easier to parse, defacto standard in the broader software industry

Thank You

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