KOMET Project

Open Metadata Evaluation Report

Tracking contributions to OpenCitations and Wikidata

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KOMET Project Evaluation Report

About KOMET

KOMET — *Kollaborative Anreicherung der Metadatenallmende zur Förderung eines diversen Open-Access-Ökosystems* (Collaborative Enrichment of the Metadata Commons to Foster a Diverse Open Access Ecosystem) — enhances metadata processes for independent, scholar-led Open Access journals. The project develops plugins and tools to improve article discoverability (https://projects.tib.eu/komet/en/). KOMET builds in part on its related project OPTIMETA (https://projects.tib.eu/optimeta/en/) and develops different tools and software to advance open research information, including three OJS plugins:

- **PID Plugin**: Integrating validated persistent identifiers (ROR, IGSN, PIDINST, ConfIDent) into article metadata in OJS (https://github.com/GaziYucel/pidManager/)
- **Citations**: Structured citation metadata in OJS core (version 3.6, see details in https://www.youtube.com/watch?v=YX4y2k-eP_w; formely developed as a plugin at https://github.com/TIBHannover/citationManager) for capture and publication to the open citation graph via OpenCitations Crowdsourcing (https://github.com/opencitations/crowdsourcing)
- **Geo Plugin**: Geospatial and temporal metadata for location-based article discovery in OJS (https://github.com/TIBHannover/geoMetadata)
- **Janeway Plugin**: Geospatial and temporal metadata for location-based article discovery (https://github.com/GeoinformationSystems/janeway_geometadata)
- **OPTIMAP**: A central discovery page for geometadata-enabled scholarly works (https://optimap.science/)

The project outputs are available on GitHub (https://github.com/TIBHannover/optimetaCitations, https://github.com/TIBHannover/optimetaGeo, https://github.com/TIBHannover/optimeta-plugin-shared) and the team communicates via Mastodon (https://openbiblio.social/@komet).

This notebook is part of the KOMET work package on evaluation. It tracks the development and, as far as possible, contributions to the open metadata commons in the areas of citation metadata and geometadata. A PDF version of this report is also available. The source of this notebook and all underlying data is available on GitHub (https://github.com/GeoinformationSystems/komet-report/).

Data Sources

Source	Purpose	Priority
OpenCitations	Citation metadata contributions	Primary
Wikidata	Scholarly graph baseline & specific properties	Monitoring

Report Information

Field	Value
Generated	2026-02-04 09:10:02 UTC
Timeline Version	2.0
Last Updated	2026-02-03 13:56:01 UTC
Update Frequency	Monthly (1st of each month)

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1. Wikidata Analysis

1.1 P1343 (Described by Source) - Limited Reach

The original KOMET proposal mentioned using **P1343 ("described by source")** to mark contributions from project plugins. However, our analysis reveals this property has **very limited usage** for scholarly articles. Instead, P1343 is primarily used for encyclopedias/reference works and is not among widely used properties for citations in Wikidata. It is also not included in any Wikidata export, because the primary target for citation data contributions has shifted to OpenCitations.

P1343 Limitation Finding

Metric	Value
Scholarly articles with P1343	**14**
Total scholarly articles in Wikidata	~37,000,000
Items referencing KOMET as source	0

Conclusion: P1343 is not suitable for tracking KOMET contributions.

1.2 P2860 (Cites Work) - Partner Journal Baseline

We track **P2860 (cites work)** relationships for KOMET partner journals to establish a baseline for measuring impact over time. These are OJS-based journals from academic institutions that have originally committed to testing the KOMET plugins. The following tables summarize the current state of citations from these journals only in Wikidata.

Partner Journal Wikidata Statistics
Total journals tracked: 15 | **Total articles:** 42 | **Total citations:** 2

Journal	Partner	Wikidata QID	Articles	Citations (P2860)
Journal of South Asian Linguistics	KIM Universität Konstanz	Q122948152	0	0
Free Neuropathology	WWU Münster	Q108455809	0	0
Jahrbuch für Christliche Sozialwissenschaften	WWU Münster	Q1678617	0	0

Journal	Partner	Wikidata QID	Articles	Citations (P2860)
Journal für Kulturpflanzen	Julius Kühn-Institut	Q1455822	0	0
VITIS - Journal of Grapevine Research	Julius Kühn-Institut	Q15756080	0	0
Journal of Applied Botany and Food Quality	Julius Kühn-Institut	Q15764825	0	0
Francia-Recensio	heiJOURNALS Heidelberg	Q101247086	0	0
Heidelberger Beiträge zum Finanz- und Steuerrecht	heiJOURNALS Heidelberg	Q105103105	0	0
Informationspraxis	heiJOURNALS Heidelberg	Q46478422	28	2
International Journal of Dream Research	heiJOURNALS Heidelberg	Q96332444	0	0
Journal of Dynamic Decision Making	heiJOURNALS Heidelberg	Q50817185	0	0
Archäologischer Anzeiger	Deutsches Archäologisches Institut	Q636752	0	0
Journal of Spatial Information Science	JOSIS / TU Dresden	Q50814880	0	0
Cognitio	ZHB Luzern	Q111049844	0	0
itdb - inter- und transdisziplinäre Bildung	ZHB Luzern	Q107074231	14	0

1.3 Comparison with 2022 Baseline

The 2022 baseline data allows tracking changes in Wikidata coverage over time.

2022 Baseline vs Current Wikidata Coverage

Journal	2022 Articles	Current Articles	Change	OpenAlex (2022)
Journal of South Asian Linguistics	0	0	+0	0
Free Neuropathology	0	0	+0	0
Jahrbuch für Christliche Sozialwissensch...	0	0	+0	850
Journal für Kulturpflanzen	0	0	+0	558
VITIS - Journal of Grapevine Research	0	0	+0	1762
Journal of Applied Botany and Food Quali...	3	0	-3	419

Journal	2022 Articles	Current Articles	Change	OpenAlex (2022)
Francia-Recensio	1	0	-1	1096
Heidelberger Beiträge zum Finanz- und St...	0	0	+0	0
Informationspraxis	55	28	-27	43
International Journal of Dream Research	0	0	+0	352
Journal of Dynamic Decision Making	0	0	+0	18
Archäologischer Anzeiger	0	0	+0	224
Journal of Spatial Information Science	25	0	-25	201
Cognitio	31	0	-31	0
itdb - inter- und transdisziplinäre Bild...	13	14	+1	0

1.4 Observations

The comparison between Wikidata coverage and OpenAlex data reveals significant insights about the current state of metadata in the open knowledge commons.

Key Findings

Metric	Value
Active Journals in Wikidata	2 of 15 journals have articles indexed
Wikidata vs OpenAlex Gap	0.8% Wikidata coverage of OpenAlex articles

Informationspraxis (Q46478422) leads with 28 articles and 2 citation relationships — the only journal with P2860 data. **8 journals** have significant OpenAlex coverage but zero Wikidata presence.

Journal	OpenAlex Articles	Wikidata Articles
VITIS - Journal of Grapevine Research	1762	0
Francia-Recensio	1096	0
Jahrbuch für Christliche Sozialwissenschaften	850	0
Journal für Kulturpflanzen	558	0
Journal of Applied Botany and Food Quality	419	0
International Journal of Dream Research	352	0
Archäologischer Anzeiger	224	0

Journal	OpenAlex Articles	Wikidata Articles
Journal of Spatial Information Science	201	0

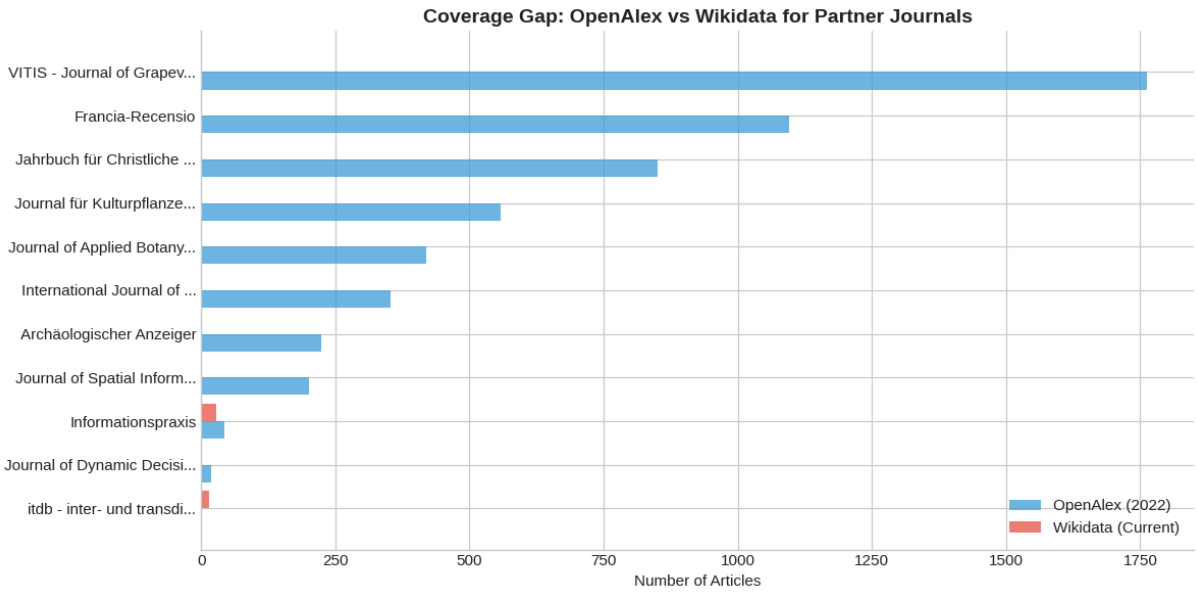

Figure 1: The gap between OpenAlex coverage and Wikidata presence demonstrates the opportunity for KOMET to enrich the metadata commons.

1.5 Discussion

The data shows a stark contrast between OpenAlex coverage (thousands of articles) and Wikidata presence (near zero for most journals). This demonstrates the gap in open research information that KOMET aims to address, even though Wikidata is not the primary output database for citation information anymore. This gap exists because there is no automated pipeline. Unlike OpenAlex, which aggregates metadata from multiple sources, Wikidata requires explicit contributions, often through significant manual effort. The lack of tools for OJS-based journals to publish structured citation metadata means that many articles remain unrepresented and disconnected in the open knowledge graph and major metadata infrastructures, and subsequently that the impact of independent journals remains invisible.

KOMET plugins can help bridge this gap by automating metadata publication from OJS to open infrastructures like OpenCitations, making the work of independent journals more visible and connected.

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2. OpenCitations

2.1 OpenCitations Crowdsourcing Analysis

OpenCitations is the primary target platform for KOMET citation metadata contributions.

The crowdsourcing repository (https://github.com/opencitations/crowdsourcing) allows trusted agents to contribute citation metadata via GitHub Issues.

OpenCitations Crowdsourcing Overview

All Crowdsourcing Activity

Total submissions: 15

Status	Count
invalid	11
unknown	2
done	1
to_be_processed	1

KOMET Contributions

Total KOMET submissions: 4

Status	Count
Successful	0
Pending	0
Invalid	4

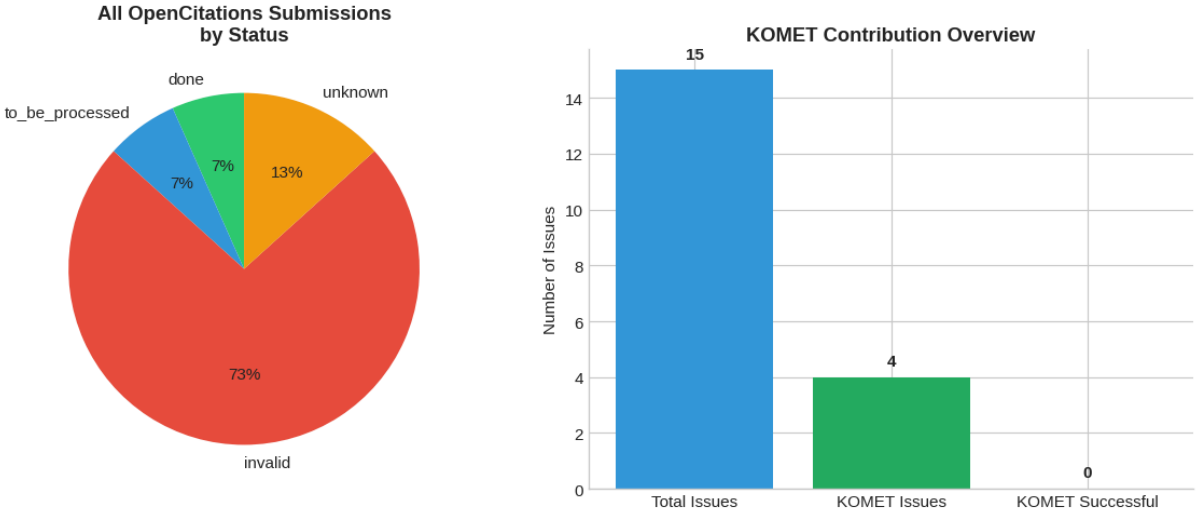

Figure 2: OpenCitations crowdsourcing activity breakdown showing KOMET's contribution share.

KOMET Software Contributions

Contributors tracked: GaziYucel

Issue	Title	Status	Created	Creator
#6	deposit localhost doi:10.1234/37fs2v66	invalid	2025-10-10	GaziYucel
#5	deposit localhost doi:10.1234/37fs2v66	invalid	2025-10-09	GaziYucel
#4	deposit localhost doi:10.1234/37fs2v66	invalid	2025-10-09	GaziYucel

Issue	Title	Status	Created	Creator
#3	deposit localhost doi:10.0000/1rjphk47	invalid	2025-03-27	GaziYucel
#2	Add GaziYucel to whitelist.txt	rejected	2023-04-04	GaziYucel

2.2 OpenCitations Index - Partner Journal Coverage

The OpenCitations Index contains citation data from multiple sources. We query the OpenCitations API to check how many citations exist for articles published in KOMET partner journals.

Summary: 13 journals have ISSNs | 0 have citations in OpenCitations | **Total citations: 0**

Journal	ISSN	Citations in OC Index
Journal of South Asian Linguistics	1947-8232	0
Free Neuropathology	2699-4445	0
Jahrbuch für Christliche Sozialwissensch...	—	—
Journal für Kulturpflanzen	1867-0911	0
VITIS - Journal of Grapevine Research	0042-7500	0
Journal of Applied Botany and Food Quali...	0066-1759	0
Francia-Recensio	2425-3510	0
Heidelberger Beiträge zum Finanz- und St...	—	—
Informationspraxis	2297-3249	0
International Journal of Dream Research	1866-7953	0
Journal of Dynamic Decision Making	2365-8037	0
Archäologischer Anzeiger	0003-8105	0
Journal of Spatial Information Science	1948-660X	0
Cognitio	2624-8417	0
itdb - inter- und transdisziplinäre Bild...	2673-7671	0

Note: Citation counts are retrieved from the OpenCitations Index API. A count of 0 means the journal's articles are not yet indexed in OpenCitations, representing an opportunity for KOMET contributions.

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3. Partner Journal Overview

Complete overview of all KOMET collaboration partners and their journals. The partner list originates from the OPTIMETA project (https://projects.tib.eu/optimeta/en/).

Summary: 15 journals with Wikidata entries | 7 journals pending Wikidata creation

Journals with Wikidata Entries

Journal	Partner Organization	Website	Wikidata	OJS Version
Journal of South Asian Linguistics	KIM Universität Konstanz	Link	Q122948152	3.3.0.14
Free Neuropathology	WWU Münster	Link	Q108455809	3.3.0.13
Jahrbuch für Christliche Sozialwissenschaften	WWU Münster	Link	Q1678617	3.3.0.13
Journal für Kulturpflanzen	Julius Kühn-Institut	Link	Q1455822	3.3.0.8
VITIS - Journal of Grapevine Research	Julius Kühn-Institut	Link	Q15756080	3.3.0.8
Journal of Applied Botany and Food Quality	Julius Kühn-Institut	Link	Q15764825	3.3.0.8
Francia-Recensio	heiJOURNALS Heidelberg	Link	Q101247086	3.2.1.4
Heidelberger Beiträge zum Finanz- und Steuerrecht	heiJOURNALS Heidelberg	Link	Q105103105	3.2.1.4
Informationspraxis	heiJOURNALS Heidelberg	Link	Q46478422	3.2.1.4
International Journal of Dream Research	heiJOURNALS Heidelberg	Link	Q96332444	3.2.1.4
Journal of Dynamic Decision Making	heiJOURNALS Heidelberg	Link	Q50817185	3.2.1.4
Archäologischer Anzeiger	Deutsches Archäologisches Institut	Link	Q636752	3.4.0.6
Journal of Spatial Information Science	JOSIS / TU Dresden	Link	Q50814880	3.3.0.6
Cognitio	ZHB Luzern	Link	Q111049844	3.3.0.12
itdb - inter- und transdisziplinäre Bildung	ZHB Luzern	Link	Q107074231	3.3.0.12

Journals Pending Wikidata Creation

- Formal Approaches to South Asian Languages (KIM Konstanz)
- Journal of Historical Syntax (KIM Konstanz)
- KIM Kompakt (KIM Konstanz)
- The Byzantine Review (WWU Münster)
- Mittelalter Digital (WWU Münster)
- Volcanica (Independent)
- GEUS Bulletin (Independent)

Publishing Platforms

- KIM - Universität Konstanz
- WWU E-Journals Münster
- e-journals Julius Kühn-Institut

- heiJOURNALS Heidelberg
- TIB Open Publishing
- ZHB Luzern

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4. Summary & Key Metrics

Summary Metrics

Metric	Value
Partner Journals	15
Wikidata Articles	42
OpenCitations Submissions	4
Successful Deposits	0

OpenCitations Metrics Timeline

Metric	Value	Last Updated
OC Index Citations (Francia-Recensio)	0	2026-02-03
OC Index Citations (itdb - inter- und tr)	0	2026-02-03
OC Index Citations (Free Neuropathology)	0	2026-02-03
OC Index Citations (Cognitio)	0	2026-02-03
OC Index Citations (Journal of South Asi)	0	2026-02-03
OC Index Citations (Journal für Kulturpf)	0	2026-02-03
OC Index Citations (VITIS - Journal of G)	0	2026-02-03
OC Index Citations (Journal of Applied B)	0	2026-02-03
OC Index Citations (Informationspraxis)	0	2026-02-03
OC Index Citations (Journal of Spatial I)	0	2026-02-03
OC Index Citations (Journal of Dynamic D)	0	2026-02-03
OC Index Citations (Archäologischer Anze)	0	2026-02-03
OC Index Citations (International Journa)	0	2026-02-03
KOMET Successful	0	2026-01-30
KOMET Invalid	4	2026-01-30
KOMET Issues	5	2026-01-30
KOMET Pending	0	2026-01-30
Total Crowdsourcing Issues	16	2026-01-30

5. Geospatial & Temporal Metadata Analysis

This section tracks the availability of **geospatial and temporal metadata** on scholarly works in Wikidata. The KOMET Geo Plugin and OPTIMAP aim to enrich scholarly articles with location and time period information.

5.1 Wikidata Mechanisms for Geospatial Metadata

Wikidata **lacks purpose-built properties** for "study location" or "research area" on scholarly articles. The available mechanisms are:

Approach	Properties	Description
Direct coordinates	P625	Attach coordinates directly to the article
Bounding box	P1332, P1333, P1334, P1335	North/South/East/West extent of study area
GeoShape	P3896	GeoJSON polygon/line data stored on Wikimedia Commons
Subject-based linking	P921 → geo item	Link article to geographic entity with coordinates
Temporal scope	P580, P582	Start/end time of the research period

The OPTIMAP Wikidata export uses **P625** for center coordinates and **P1332-P1335** for bounding boxes, plus **P580/P582** for temporal scope. **P3896 (geoshape)** could additionally be used for complex study area boundaries stored as GeoJSON files in the Wikimedia Commons Data namespace.

5.2 Current Statistics

Geospatial Properties on Scholarly Articles

Property	ID	Description	Count
Coordinate location	P625	Direct lat/lon coordinates	**46**
Bounding box (any)	P1332-P1335	Articles with any N/S/E/W extent property	**1**
GeoShape	P3896	GeoJSON polygon/line data (Commons)	**0**
Geographic main subject	P921 → geo item	Subject links to item with P625	**5**

Temporal Properties on Scholarly Articles

Property	ID	Description	Count
Start time	P580	Research period start	**11**
End time	P582	Research period end	**9**

Explore Geospatial Scholarly Articles

Click the links below to run pre-filled queries in the **Wikidata Scholarly Query Service**:

Property	Query Link
P625 (Coordinates)	Run Query
P1332-P1335 (Bounding Box)	Run Query
P3896 (GeoShape)	Run Query
P921 ⟶ Geographic Subject	Run Query
P580/P582 (Temporal Scope)	Run Query

Note: Queries use the scholarly-specific endpoint optimized for ~41M scholarly articles. Bounding box and temporal queries use UNION to find articles with **any** of the properties.

Global Distribution Map

The map below visualizes all scholarly articles in Wikidata that have geospatial metadata. It uses an Equal Earth equal-area projection that preserves geographic area with acceptable distortion. The visualization distinguishes between:

- **Red dots (P625)**: Direct coordinate locations
- **Blue rectangles (P1332-P1335)**: Bounding box study areas
- **Purple polygons (P3896)**: Complex GeoShape boundaries from

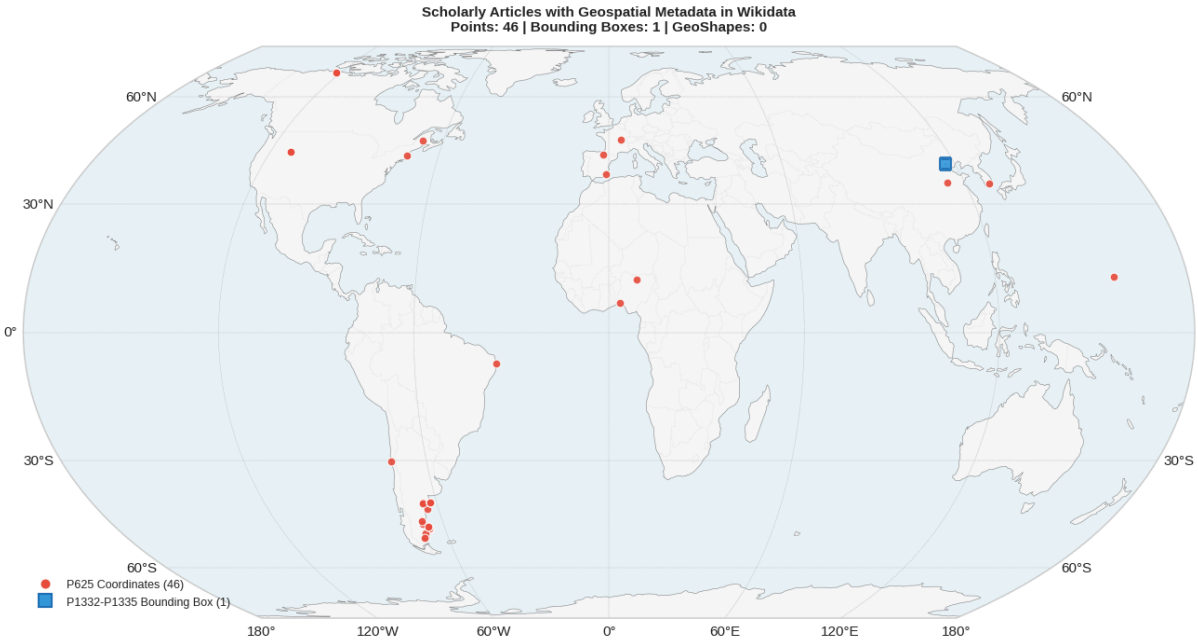

Figure 3: Global distribution of scholarly articles with geospatial metadata. Small polygons (bounding boxes, geoshapes) are marked with symbols at their centroids for visibility. Note: The bounding box in Mongolia/China region has incorrect coordinates in Wikidata (should be in Nevada, USA).

Partner Journal Geospatial & Temporal Coverage

Journals with any geospatial data: 0 | **Journals with temporal data:** 0

Columns: P625 = direct coordinates, Bbox = bounding box (P1332-P1335), Shape = geoshape/GeoJSON (P3896), Temporal = start/end time (P580/P582), Geo Subj = geographic main subject

Journal	ISSN	Publisher	Articles	P625	Bbox	Shape	Temporal	Geo Subj
Journal of South Asian Linguistics	1947-8232	—	0	0	0	0	0	0
Free Neuropathology	2699-4445	University of Münster	0	0	0	0	0	0
Jahrbuch für Christliche Sozialwiss...	—	—	0	0	0	0	0	0
Journal für Kulturpflanzen	1867-0911	Eugen Ulmer Verlag	0	0	0	0	0	0
VITIS - Journal of Grapevine Resear...	0042-7500	Julius Kühn-Institut	0	0	0	0	0	0
Journal of Applied Botany and Food ...	0066-1759	Section Applied Botany of...	0	0	0	0	0	0
Francia-Recensio	2425-3510	German Historical Institu...	0	0	0	0	0	0
Heidelberger Beiträge zum Finanz- u...	—	—	0	0	0	0	0	0
Informationspraxis	2297-3249	Heidelberg University Lib...	28	0	0	0	0	0
International Journal of Dream Rese...	1866-7953	—	0	0	0	0	0	0
Journal of Dynamic Decision Making	2365-8037	Heidelberg University Lib...	0	0	0	0	0	0
Archäologischer Anzeiger	0003-8105	Hirmer Verlag	0	0	0	0	0	0

Journal	ISSN	Publisher	Articles	P625	Bbox	Shape	Temporal	Geo Subj
Journal of Spatial Information Scie...	1948-660X	University of Maine	0	0	0	0	0	0
Cognitio	2624-8417	—	0	0	0	0	0	0
itdb - inter- und transdisziplinäre...	2673-7671	—	14	0	0	0	0	0

5.3 Discussion

Wikidata contains ~41 million scholarly articles (Q13442814). The extremely low counts above demonstrate the opportunity for the approaches developed in KOMET to contribute geospatial metadata to the commons. In particular, the statistics above reveal a the following significant gaps:

- **Less than 50 articles** out of ~41 million have direct coordinate data (P625)
- **Very few articles** use bounding box properties (P1332-P1335) to define study areas
- **Subject-based linking** (P921 → geo item) for geographic entities is scarcely used
- **GeoShape (P3896)** for complex geometries is virtually unused
- **Temporal scope metadata** (P580/P582) for study periods is equally rare

This represents a major opportunity for KOMET, via the geoMetadata plugins for OJS and Janeway for collection and display, and through OPTIMAP for crowdsourcing and curation, to contribute meaningful geospatial enrichment to the scholarly metadata commons. The OPTIMAP portal and its Wikidata export functionality use a comprehensive model:

1. **Center coordinates** (P625) for point locations
2. **Bounding box** (P1332-P1335) for spatial extent
3. **Temporal scope** (P580/P582) for research time periods
4. **Export marker** in item description for tracking contributions

Note: P3896 (geoshape) could be used for complex study area boundaries as GeoJSON files on Wikimedia Commons, but this is not currently part of the OPTIMAP export model.

As journals adopt the KOMET geoMetadata plugins and OPTIMAP collects these data and export them to Wikidata, the baseline numbers and methods in this notebook will allow to measure the growth in geospatially-annotated scholarly articles, track KOMET contributions specifically, and demonstrate the project's impact on the metadata commons.

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6. Status and Next Steps

The notebook is able to run automatically on a monthly basis via GitHub Actions. This allows tracking progress over time as KOMET plugins are adopted by journals and as the OJS core's citations feature is utilized by more and more OJS instances. The workflow establishes a baseline for future comparison, not only for Wikidata but also for OpenCitations contributions. The data included in this report is saved as machine readable data files (JSON) in the repository for future uptake by other tools or analyses.

Ideas for future work are captures in the open development repository on GitHub: https://github.com/GeoinformationSystems/komet-report/.

License & Data Sources

This Notebook

Code:

CC0 1.0 Universal

Report outputs:

CC-BY 4.0

External Data Sources

Source	License	Terms
Wikidata	CC0 1.0	Wikidata Licensing
OpenCitations	CC0 1.0	OpenCitations Licensing

Citation

Nüst, D., Niers, T., Hauschke, C., & Yücel, G. (2026). *KOMET Project - Open Metadata Evaluation Report* [Data set]. Zenodo. https://doi.org/10.5281/zenodo.18479191

```bibtex
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  year         = 2026,
  publisher    = {Zenodo},
  doi          = {10.5281/zenodo.18479191},
  url          = {https://doi.org/10.5281/zenodo.18479191}
}
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