

Scientific Approach, Outputs & Impact

Publications & Peer Review · Impact Metrics & Open Access
Scientific Integrity · Research Profiles · Funding

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PhD Programme in Climate Change and Sustainable Development Policies

8 May 2026

Class Overview

01 Publication Typologies & Peer Review

02 Impact Metrics, Journal Tools & Open Access

03 Scientific Integrity

04 Research Communication & Scientific Profiles

05 Applying to Funding



Hands-On Exercise

01 Publications & Peer Review

Typologies · The Review Process · What Editors Want

Why Publish?

Scientists publish to share findings that advance knowledge and understanding

New & Original Findings

Present novel results, methods or approaches that have not been published before.

Systematize Results

Organize and consolidate existing findings into a structured body of knowledge.

Integrated Reviews

Holistic overview of a field or sub-topic to guide future research agendas.

Your personal reason (funding, PhD, promotion...) is irrelevant to editors and reviewers — the content is all that counts.

Publications Progress

- The scale is staggering: over 3 million peer-reviewed articles are published globally every year, meaning roughly 10,000 new papers every single day competing for readers, reviewers, and citations.
- Growth is relentless:** output has risen by ~48% over a decade (Web of Science) and by up to 65% when counting all Scopus document types, driven by more researchers, more journals, and high-volume open-access publishers like MDPI and Frontiers.
- Standing out is harder than ever:** with this volume, a weak title, a poor abstract, or the wrong journal choice means your paper is effectively invisible; strategic publishing decisions are not optional.
- The system is under strain:** peer review alone consumed an estimated 130 million hours globally in 2020, and that cost grows every year; as a researcher, you will be asked to review far more than you expect, and doing it well is part of your scientific citizenship, tough....



Publication Typologies

Conference Papers

5–10 pp · 3 fig · 15–20 refs

Early/in-progress findings. Good to start a research career.

Full/Original Articles

7,500–8,500 words · 5 fig · 25 refs

Standard for completed research. Core of a research career.

Short Communications

3,000–3,500 words · 2–4 fig · 5–8 refs

Quick early communications of significant original advances.

Review Papers

9,000–13,000 words · 5–10 fig · 80–300 refs

Critical synthesis. Often solicited. [Consolidates a career but is becoming increasingly common among PhD students.](#)

Discuss: Differences between Journals.

What Editors & Reviewers Want

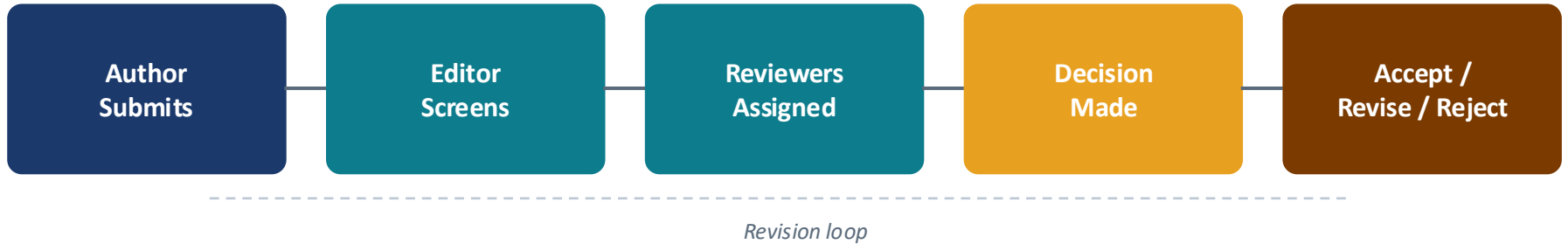
✓ WANTED

- Originality & novelty
- Significant advances in the field
- Appropriate methods and sound conclusions
- Readability and clear structure
- Studies meeting ethical standards

✗ NOT WANTED

- Duplications of existing work
- Reports with no scientific interest
- Work that is out of date
- Inappropriate methods or conclusions
- Insufficient or poorly reported data

The Peer Review Process



Reviewers Evaluate:

Originality: Is it novel, important, does it add to the canon?

Structure: Abstract → Introduction → Methods → Results → Conclusions

Methods & Data: Can results be reproduced? Is analysis sound?

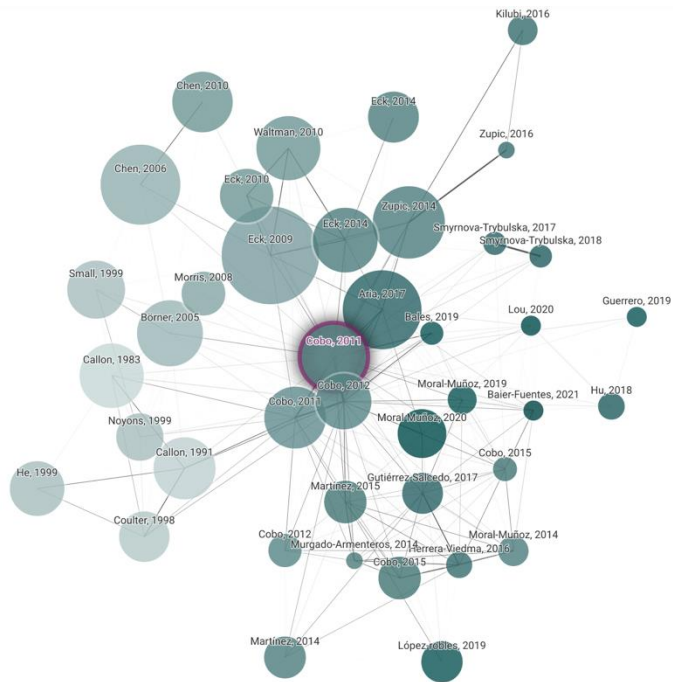
Language: English quality — correction is NOT the reviewer's role

References: Balanced, accurate, appropriate, no excessive self-citation

Discuss: Reviewing Process

Connected Papers — Visualising Citation Networks

connectedpapers.com — free tool that builds a visual graph of papers related to a seed paper, based on co-citation and bibliographic coupling.



Explore connected papers in a visual graph

To start, enter a paper identifier

For example "DARTS: Differentiable Architecture Search"

Build a graph

You can try:

 Paper DOI

 Paper URL

 Paper Title

 Semantic Scholar Paper URL

 PubMed Paper URL

How to use it

- Enter a paper DOI, title, arXiv ID or Semantic Scholar URL
- Nodes = papers · Size = citation count · Colour = similarity cluster
- Navigate the graph to find prior work and recent follow-ups
- Click any node to open the paper in its source database
- Use 'Prior works' and 'Derivative works' panels for deeper search

02 Impact Metrics & Open Access

Journal Rankings · Quartiles · Tools · H-Index · Open Science

Key Bibliometric Indicators

Impact Factor (IF)

Average citations received per article in a journal during the preceding 2 years.

Published by Clarivate (JCR). Varies greatly by field — Environmental Sciences ~5.

CiteScore

Average citations per document over 3 years. Broader than IF, covers more journals.

Published by Scopus/Elsevier. Generally slightly higher than IF.

SJR (SCImago Journal Rank)

Weights citations by the prestige of the citing journal. Used by SCImago to assign Q1–Q4 quartiles.

Freely accessible at scimagojr.com — no subscription needed.

SNIP

Source Normalised Impact per Paper. Adjusts for citation behaviour differences between fields.

Useful for comparing journals across very different disciplines.

SCImago Journal Rankings — Q1, Q2, Q3, Q4

scimagojr.com — free, Scopus-based journal ranking portal covering 30,000+ journals across all disciplines.

Q1

Top 25%

Highest-ranked journals in a subject category by SJR. Target for high-impact work. Most selective.

Q2

26–50%

Good journals with solid visibility. Solid target for PhD students and early-career researchers.

Q3

51–75%

Lower but indexed journals. Acceptable for specific sub-topics or regional relevance.












Q4

Bottom 25%

Lowest-ranked in category. Use with caution — some are legitimate but less visible.

How to use SCImago: Search by journal name or subject area → filter by year → check Q ranking, SJR value, country, publisher, and OA status. Each journal has a profile with trend charts.

SCImago Journal Rankings – Example on Energy

Title	Type	↓ SJR	H index	Total Docs. (2025)	Total Docs. (3years)	Total Refs. (2025)	Total Citations (3years)	Citable Docs. (3years)	Citations / Doc. (2years)	Ref. / Doc. (2025)	%Female (2025)	
1 Nature Reviews Materials	journal	20.801 Q1	242	112	353	11047	13285	194	33.95	98.63	29.37	
2 Nature Energy	journal	20.769 Q1	291	232	676	7149	20965	407	32.01	30.81	25.96	
3 Joule	journal	12.922 Q1	252	243	652	13117	18231	470	26.16	53.98	28.84	
4 eScience	journal	11.618 Q1	82	73	180	7761	7552	179	49.11	106.32	35.34	
5 Energy and Environmental Science	journal	9.244 Q1	491	598	1581	46563	45756	1571	27.82	77.86	31.03	
6 Electrochemical Energy Reviews	journal	8.084 Q1	94	35	115	7262	4162	115	45.22	207.49	33.33	
7 Progress in Energy and Combustion Science	journal	8.013 Q1	257	23	94	7537	4463	93	45.07	327.70	17.89	
8 Nature Sustainability	journal	7.896 Q1	174	218	655	8779	14083	470	20.73	40.27	32.45	
9 Advanced Energy Materials	journal	7.677 Q1	388	1211	2754	88490	71493	2745	25.67	73.07	31.55	
10 ACS Energy Letters	journal	5.783 Q1	252	661	1772	36513	30627	1713	16.74	55.24	31.94	
11 EnergyChem	journal	4.906 Q1	59	29	62	6552	1452	61	20.32	225.93	28.92	

SCImago Journal Rankings - Example

Energy Policy

United Kingdom | Universities and research institutions | Media Ranking

Country

United Kingdom



SCImago
Media Rankings

Subject Area and Category

Energy
Energy (miscellaneous)
Environmental Science
Management,
Monitoring, Policy and
Law

Publisher

Elsevier B.V.

SJR 2025

2.516

Q1

H-Index

311

Publication type

Journals

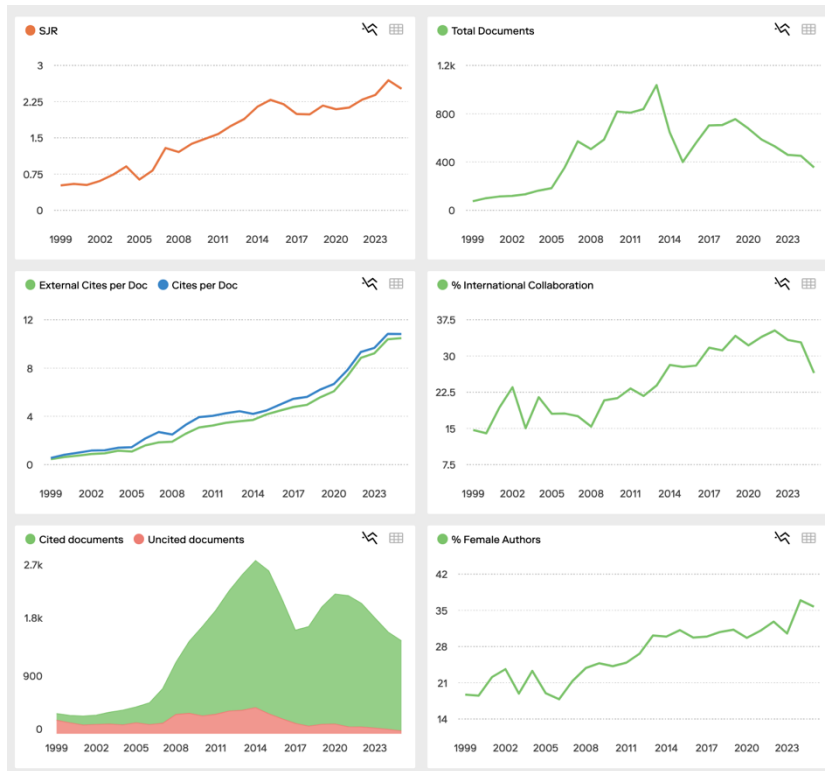
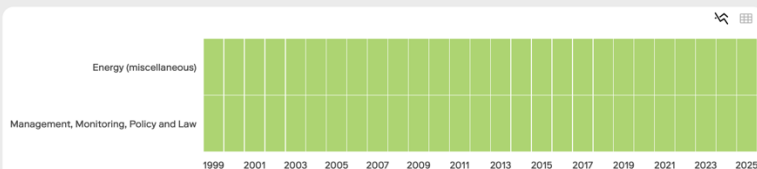
ISSN

03014215

Coverage

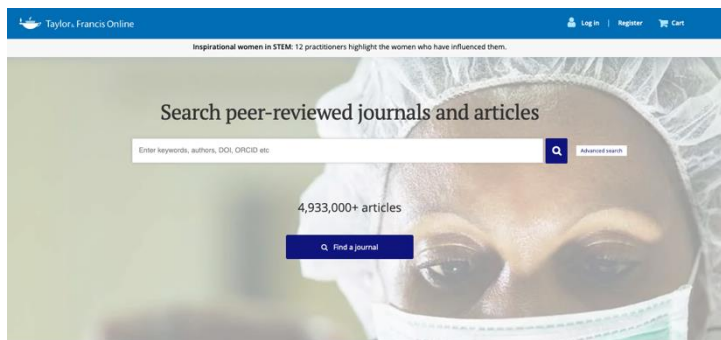
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Quartiles

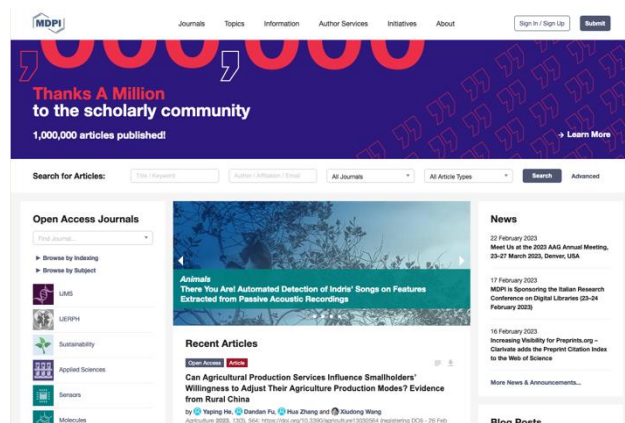


Finding the Right Journal - Publishers

- Elsevier - <https://www.elsevier.com/>
- Nature - <https://www.nature.com/>
- Science - <https://www.science.org>
- Taylor and Francis - <https://www.tandfonline.com/>
- Wiley - <https://onlinelibrary.wiley.com/>
- Frontiers - <https://www.frontiersin.org/>
- Plos One - <https://journals.plos.org/plosone/>
- MDPI - <https://www.mdpi.com/>



Explore journals and articles by subject



Science

PLOS ONE



ELSEVIER

Finding the Right Journal — Elsevier Journal Finder

journalfinder.elsevier.com — paste your title & abstract, get ranked journal recommendations with metrics.

How Elsevier Journal Finder Works

1. Paste your manuscript title and abstract
2. AI matches content to journal scope & recent articles
3. Results show: journal name, CiteScore, IF, submission info
4. Filter by OA, review time, subject area
5. Link directly to journal's Guide for Authors

Discuss: Trade-offs of journal selection

Tip: never rely on a single tool. Cross-check scope fit, recent articles published, check your references list, review turnaround time, and Q-ranking before submitting.

Other Journal Selection Tools

Springer Journal Suggester

journalsuggester.springer.com

Same concept for Springer/Nature portfolio.

Wiley Journal Finder

journalfinder.wiley.com

Covers Wiley journals including top interdisciplinary journals.

JANE (Journal/Author Name Estimator)

jane.biosemantics.org

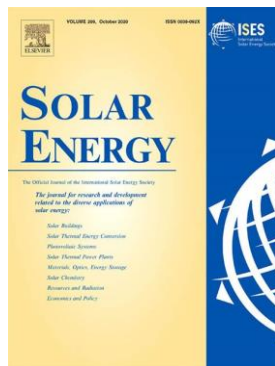
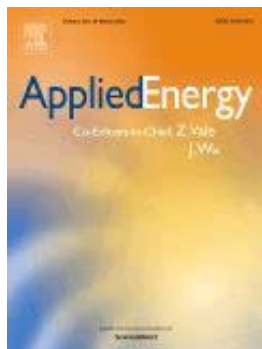
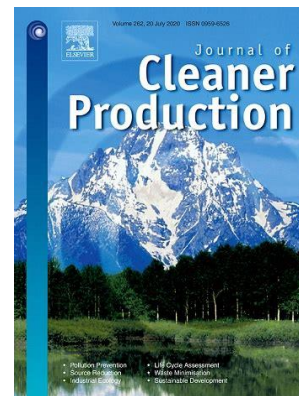
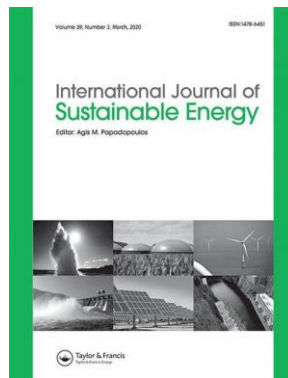
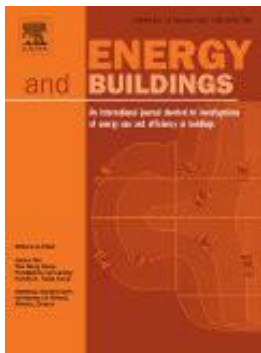
Compares your abstract to PubMed — useful for life/health sciences.

SCImago + ScienceDirect

scimagojr.com

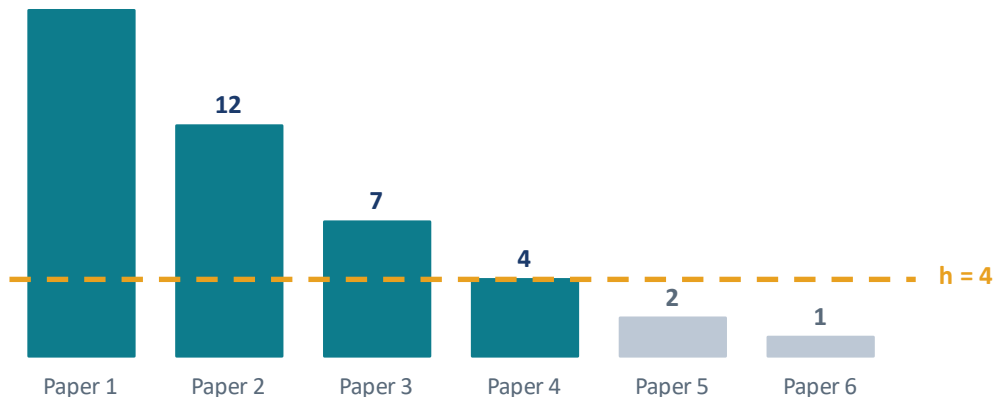
Cross-check rankings after finding candidates via a journal finder.

Finding the Right Journal



The H-Index — What It Is and What It Tells You

A researcher has h -index = h if h of their papers have each received at least h citations.



*Example: h -index = 4
(4 papers each cited ≥ 4 times)*

What h tells you:

- Sustained productivity & impact
- Resistant to single-paper outliers
- Career-stage benchmark
- Available free via Google Scholar

Limitations:

- Favours senior researchers (cumulative)
- Varies greatly by discipline
- Self-citations can inflate it
- Doesn't reward single landmark papers

Typical benchmarks (Environmental/Sustainability sciences): Early career ≈ 5 – 10 · Mid-career ≈ 15 – 25 · Senior $\approx 30+$ | Always compare within the same field.

Google Scholar and Scopus

Google Académico

 **João Pedro Gouveia**
CENSE, CHANGE, DCE4/FCT, NOVA University of Lisbon
Email confirmado em fct.unl.pt - [Página Oficial](#)
Energy Poverty Buildings Energy Efficiency Energy Systems Modeling Smart Meters
Climate Change Mitigation ...

SEGUIR

GERIR O MEU PRÓPRIO PERFIL

TÍTULO	CITADO POR	ANO
Drawdown: The most comprehensive plan ever proposed to reverse global warming P Hasek, K Wilkinson, C Frischmann, R Allard, K Sasaki, JP Gouveia, ... Pergam	1187	2017
Energy poverty vulnerability index: A multidimensional tool to identify hotspots for local action JP Gouveia, P Palma, DQ Simões Energy Reports 5, 197-201	319	2019
Energy poverty policies and measures in 5 EU countries: A comparative study I Kyriakou, DK Georgilias, A Vero, JP Gouveia, D Kopyeva, L Maroukaki Energy and Buildings 196, 48-60	261	2019
European energy poverty metrics: Scales, prospects and limits S Sabeen, H Thorsrud, ST Harero, JP Gouveia, I Lippert, A Liu Global Transitions 2, 29-36	203	2020
Energy poverty in Portugal: Combining vulnerability mapping with household interviews A Horta, JP Gouveia, L Schmidt, JC Sousa, P Palma, S Simões Energy and Buildings 203, 109463	163	2019
Unravelling electricity consumption profiles in households through clusters: Combining smart meters and door-to-door surveys JP Gouveia, J Sabeen Energy and Buildings 203, 109463	162	2016
Interplay between the potential of photovoltaic systems and agricultural land use L Dias, JP Gouveia, P Lourenço, J Sabeen Land use policy 81, 723-730	135	2019
Mining households' energy data to disclose fuel poverty: Lessons for Southern Europe JP Gouveia, J Sabeen, GJ King Journal of Cleaner Production 178, 534-550	130	2018



Pros

- Free, no institutional access needed: anyone with internet can search, cite and build a public profile
- Broadest coverage of any academic search tool, indexing journals, theses, preprints, grey literature and even book chapters that WoS and Scopus miss
- Automatically tracks citations and calculates your h-index and i10-index in real time, updated continuously
- Connected to full-text sources: often links directly to open-access or repository versions of papers

Cons

- No quality filter: predatory journals, retracted papers, and self-published content are indexed alongside peer-reviewed work, so citation counts can be inflated and misleading
- Limited metadata control: author disambiguation is imperfect; common names get profiles merged or split incorrectly, and you must manually curate your own profile
- No advanced filtering by document type, quartile, or funding source, the way Scopus or WoS allow
- Citation data cannot be exported or used for systematic reviews in any standardised way: **it is a discovery tool, not a bibliometric database**

Open Access — Why It Matters

Open Access (OA) means published research is freely available online with no subscription barriers.

Gold OA

Published directly in a fully OA journal. Author pays APC (Article Processing Charge). Immediately free to all readers.

Green OA

Published in a subscription journal, but a version (preprint or accepted manuscript) is self-archived in a repository (e.g., [Zenodo](https://zenodo.org/), institutional repos).

<https://zenodo.org/>

Hybrid OA

Subscription journal offers OA option for individual articles upon payment of APC. Commonly used with EU/ERC funded research.

Diamond OA

No cost to authors or readers. Funded by institutions or consortia. Growing model in Europe. Example: many Frontiers journals.

The Open Access Paradox — Opportunity & Risk

Open Access democratizes science, but the 'author pays' model creates incentives that can undermine the very quality it promises to disseminate.

The OA business model shift



Traditional publishing: readers/libraries pay subscriptions → journal revenue independent of acceptance rate.



Open Access (Gold/Hybrid): authors pay APCs (€500–€5,000/article) → acceptance = revenue → incentive to publish more, not better.



High-volume OA publishers (MDPI, Frontiers) grew explosively through special issues with accelerated review - **indexed, legitimate, but increasingly contested.**



The extreme end: predatory journals - no real peer review, acceptance in hours, fees collected regardless of quality.

⚠ Warning signs

✗ Unsolicited email invitation to submit

✗ Peer review completed in under 2 weeks

✗ APC demanded before review even begins

✗ Impact factor not verifiable in Clarivate JCR

✗ Editorial board listed without affiliations

✗ Journal name mimics a well-known title

Predatory Journals & the Publish-or-Perish Trap



Predatory Journals & the Publish-or-Perish Trap

Predatory journals exist because there is a market for them. Understanding systemic pressure matters more than blaming individual researchers.

The demand side

Publish-or-perish culture pushes researchers, especially early-career and PhD students to seek fast, guaranteed publication outlets.

Promotion & funding in many systems depend on publication counts, not quality: **predatory outlets deliver exactly what the incentive demands.**

Structural problem, not a moral failing: **the system creates the demand; individual blame misses the point.**

PhD students and researchers from low-resource settings are disproportionately targeted and most at risk.

The scale

~420,000
articles/year published in predatory journals (est. 2014 — growing since)

~8,000
active predatory journals identified globally

8x
growth in predatory publication volume between 2010 and 2014 alone

Days vs months
predatory journals advertise review in days; legitimate review takes 3–6 months — that gap is the clearest warning sign

How to protect yourself

✓ Check DOAJ (doaj.org) — look for the DOAJ quality seal

✓ Verify indexing in Scopus or WoS before submitting

✓ Confirm Q-ranking on SCImago (scimagojr.com)

✓ Check Think · Check · Submit (thinkchecksubmit.org)

✓ Ask your supervisor when in doubt: **always**

✗ Never cite predatory papers uncritically: **methods were never properly reviewed**

03 Scientific Integrity

Plagiarism · Authorship · Conflicts of Interest

Plagiarism — Know the Boundaries

Plagiarism is presenting someone else's work or ideas as your own, intentionally or not.

Direct Plagiarism [High]

Copy-pasting text verbatim without citation or quotation marks.

Self-Plagiarism [Medium]

Reusing substantial portions of your own published work without disclosure.

Mosaic Plagiarism [High]

Mixing paraphrased text with original phrasing without attribution.

Idea Theft [High]

Presenting another researcher's concept, hypothesis or design as original.

Inadequate Citation [Medium]

Summarising others' work without proper reference or credit.

AI-generated Text [Evolving]

Submitting AI-generated content as original research without disclosure (emerging policy issue).

Tools: iThenticate / Turnitin · CrossCheck (Elsevier) · Retraction Watch for misconduct cases

Authorship — Rights & Responsibilities

Authorship confers credit and responsibility. ICMJE criteria: conception, drafting, revision and approval.

Author Roles

- First author: conducts/supervises study, writes and submits manuscript.
- Corresponding author: handles communication with the journal (may be senior).
- CRediT taxonomy: 14 contributor roles — use to clarify contributions.
<https://credit.niso.org/>

Avoid

- ✗ **Ghost authorship:** Omitting contributors who should be included.
- ✗ **Gift/honorary authorship:** Including non-contributors (e.g., the head of the department who did not participate).
- ✗ **Salami slicing:** Splitting one study into multiple minimal publications.
- ✗ **Inconsistent naming:** Use the same name format across all publications.

<https://www.icmje.org/>

Conflicts of Interest & Ethical Standards

A conflict of interest (Col) exists when professional judgement could be influenced by a secondary interest (financial, personal, institutional).



Financial Col

Funding from industry with stake in results.
Honoraria, stocks, patents.



Personal Col

Personal relationship with editors, reviewers or competing authors.



Institutional Col

Institutional affiliation or policy positions influencing interpretation.



Declaration Requirement

All journals require a Col statement. Disclose all funding sources (grant numbers!).



Data Availability

Many journals now require data sharing statements or repository links.



Research Ethics

Approval for human/animal subjects (IRB/ethics committee). Informed consent.

04 Research Communication & Scientific Profiles

ORCID · ResearchGate · Google Scholar · Science Communication

Your Scientific Profile — Key Platforms for sharing your work

ORCID

orcid.org

Persistent digital identifier for researchers. Connects your works across publishers and institutions. FREE. Use consistently in all submissions.

Google Scholar

scholar.google.com

Broadest coverage. Tracks citations, h-index and i10-index. Includes grey literature. Public profile boosts visibility.

ResearchGate

researchgate.net

Social network for researchers. Share preprints and articles, follow collaborators, track reads and citations. Useful for networking.

Scopus Author

scopus.com

Curated database by Elsevier. Accurate citations. Provides SJR/SNIP metrics. Requires institutional access.

Your Scientific Profile — Grow your Network and Impact



João Pedro Gouveia

PhD in Climate Change and Sustainable Development Policies - Sustainable Energy Systems - Principal Researcher at Universidade NOVA de Lisboa

Lisboa, Portugal

✉ Coordination Team of the European Energy Poverty Advisory Hub (EPAH)

2,112 Research Interest Score | 3,338 Citations | 30 h-index

Profile Research (141) Stats Following Saved list Add research

About me

João Pedro Gouveia is a senior researcher at FCT/NOVA within CENSE - Energy and Climate research area. His research focuses on low-carbon futures, energy poverty mitigation, renewable energy communities, smart meter data mining, and the vulnerability and adaptation of energy systems to global warming. PI of several national and EU-funded research and consultancy projects. Member of Editorial Board of PLOS Climate and Associate Editor of Frontiers in Sustainable Cities.

Disciplines
Environmental Engineering
Contact information
x profile Website

Opportunities for you

João, we found 173 opportunities for you to publish open access

Universidade NOVA de Lisboa may cover your fees for these journals:

Food Additives & Contaminants Part A Taylor & Francis

Journal of Applied Physics

Positive Energy District: A Model for Historic Districts to Address Energy Poverty

Article April 2021 · 670 Reads · 88 Citations

Frontiers in Sustainable Cities

João Pedro Gouveia · Julia Seixas · Pedro Palma · [...] · Giovan Battista Cavadini

Download

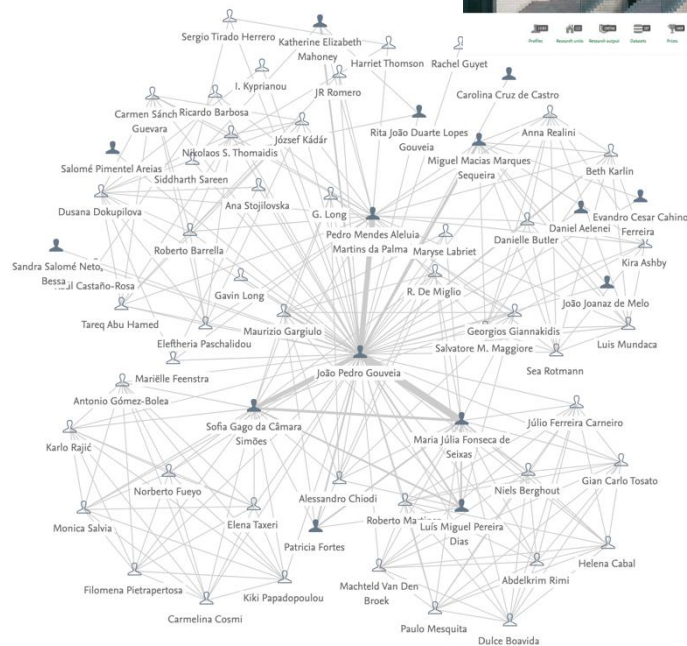
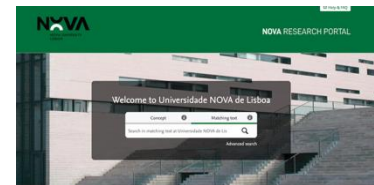
Share

Energy poverty vulnerability index: A multidimensional tool to identify hotspots for local action

Article February 2019 · 800 Reads · 245 Citations

Energy Reports

João Pedro Gouveia · Pedro Palma · Sofia G Simões



Research Communication Beyond Journals

Impact goes beyond the article. Researchers are increasingly expected to communicate to non-specialist audiences.

Conferences & Seminars

Present at international conferences (poster + oral). Build network, get feedback on work-in-progress.

LinkedIn & Social Media

Share articles, project milestones, policy engagement. Crucial for visibility outside academia.

Policy Briefs & Reports

Translate findings into accessible 2-page summaries for policymakers and non-specialist audiences.

Media & Outreach

Press releases, radio interviews, newspaper op-eds. Science communication training is increasingly valued.

Preprint Servers

Zenodo, ESSOAr, SSRN - share results immediately before peer review. Open and citable via DOI.

Data & Code Sharing

GitHub, Zenodo, OSF, and Dataverse - open data and code boost reproducibility and citations.

05 Applying to Funding

Sources · EU Programmes · Proposal Writing · Practical Tips

The Research Funding Landscape

European Research Council (ERC)

Starting · Consolidator · Advanced · Synergy

Highly competitive, excellence-based, no thematic restriction. PI-driven.

Horizon Europe

Pillar 1 (ERC) · Pillar 2 (Missions) · Pillar 3 (Innovation)

*EU's main R&I framework 2021-27 (€95.5 bn). Collaborative projects. **HUB IN and AI4SUSTAIN examples***

LIFE Programme

Nature & Biodiversity · Circular Economy · Climate Action

*EU environment & climate fund. Often multi-partner. **ENTRACK, HORIS, LOCATEE & EP-MED examples.***

FCT (Portugal)

Individual grants · Institutional · Exploratory · Strategic

National Science Foundation (Portugal). PhD scholarships, postdoc, project grants.

Also: bilateral cooperation (FCT/DAAD/ANR...), Structural Funds (FEDER), Foundations (Gulbenkian, Luso-Americana), private sector R&D.

Anatomy of a Winning Proposal

Proposals follow scientific logic: mirror the article structure but focus on the future.

State of the Art

What is already known? What is the gap? Why now? Cite key literature. **Demonstrate you command the field.**

Methodology

How will you do it? Timeline (Gantt chart), work packages, milestones. **Show feasibility.**

Team & Resources

Who does what? Track record, complementarity, infrastructure. **Justify budget line by line.**

Objectives & Questions

Clear, measurable, ambitious, but achievable. **SMART objectives:** Specific, Measurable, Assignable, Realistic and Time-related. **Align with funder priorities.**

Expected Impact

Scientific, societal, policy and economic impact. Dissemination & exploitation plan. Letters of Support. **Open science approach.**

Budget

Detailed, justified, realistic. Personnel typically account for 60-80% of the total. **Overhead rates per funder rules.**

Practical Tips for Grant Applications

Read the call carefully

Align your proposal language with the funder's vocabulary. Check eligibility criteria first.

Start with the summary

Write the abstract/executive summary first and last. It frames everything else. Evaluators read it first.

Build the right consortium

For collaborative grants: complementary partners, geographic balance, clear roles and leadership.

Show track record

Publications, previous grants, supervised students, partnerships. Quantify your productivity.

Leave time for revision

Submit at least 24h before deadline. Internal review by colleagues or grant office is essential.

Resubmit rejected proposals

Most funded grants were rejected once before. Use reviewer feedback. Try a different call if needed.

Hands-On Exercise

Try the following tools with your own research topic or a paper you know:

Google Scholar

<https://scholar.google.com/>

Search your topic · build your own profile · check citation count

ScienceDirect

<https://www.sciencedirect.com/>

Full-text search · filter by Q1 journals · check OA availability

Connected Papers

<https://www.connectedpapers.com>

Enter a key paper DOI · explore the citation network graph

SCImago

<https://www.scimagojr.com/>

Search a journal · identify its quartile, SJR and subject category

Elsevier Journal Finder

<https://journalfinder.elsevier.com/>

Paste your abstract · get matched journal suggestions with metrics



Key Takeaways

Publish strategically

Right typology, right journal, right timing. One submission at a time.

Integrity is non-negotiable

Plagiarism and authorship misconduct have career-ending consequences.

Communicate beyond journals

Policy briefs, LinkedIn, conferences, your impact multiplies outside paywalls.

Metrics matter, but contextually

IF, h-index, CiteScore, Q-ranking differ by field. Never compare across disciplines.

Build your profile actively

ORCID + Google Scholar + ResearchGate from day one. Be consistent.

Apply for funding early & often

Match your ideas to calls. Rejection is part of the process - resubmit.