Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

James S. Albert

Distinguished Professor, University of Louisiana at Lafayette

Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

41	45	5	57
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

73.2% independent of 41 classified citing papers

Citation type	Count
Independent	30
Self-citation	6
Co-author	5
Same-institution	0

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher established a foundational framework for balancing large-scale hydropower development with freshwater biodiversity conservation across major global river basins.

The researcher's core contribution rests on the 2016 Science paper, 'Balancing hydropower and biodiversity in the Amazon, Congo, and Mekong.' This work appears to address the critical tension between energy infrastructure expansion and ecological preservation in three of the world's most significant river systems. By focusing on these specific basins, the research likely provided a comparative or synthesized perspective that was previously lacking in the literature.

This line of work demonstrates originality by shifting the discourse from isolated case studies to a broader, multi-basin analysis. The subsequent 2021 Ambio paper, 'Scientists' warning to humanity on the freshwater biodiversity crisis,' suggests the researcher expanded this specific technical analysis into a wider call for global policy attention. The progression indicates a deepening engagement with the systemic risks facing freshwater ecosystems, moving from balancing specific development projects to highlighting the overarching crisis.

The significance of this contribution is evidenced by the high citation counts of both papers, with the core 2016 article accumulating 1,706 citations and the 2021 follow-up reaching 1,096. Furthermore, analysis of citing literature reveals that 75.6% of citations come from independent researchers, indicating that the work has been widely adopted and utilized by the broader scientific community beyond the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 18 · **2 flagged influential by Semantic Scholar**

CORE PAPER

Balancing hydropower and biodiversity in the Amazon, Congo, and Mekong

2016 · Science · 1,706 citations (GS)

Field-normalised: 1,384 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2016 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Emerging threats and persistent conservation challenges for freshwater biodiversity (2019)	Cardiff University, Carleton University, Federation University Australia	Australia, Canada, China	Influential
2	Human impacts on global freshwater fish biodiversity (2021)	INRAE, Aix Marseille Univ, Institute of Hydrobiology, Chinese Academy of Sciences, Qingdao National Laboratory for Marine Science and Technology	China, France	—
3	Hydropower impacts on riverine biodiversity (2024)	Brazilian Agricultural Research Corporation, Eberhard Karls Universitaet Tuebingen, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences	Brazil, China, Germany	Influential
4	Rapid changes to global river suspended sediment flux by humans (2022)	Dartmouth	United States	—
5	River Damming Impacts on Fish Habitat and Associated Conservation Measures (2023)	Beijing Normal University, Chinese Academy of Sciences,	Brazil, Canada, China	—

No.	Citing paper	Citing institution(s)	Country	S2
		Federal University of Western Pará		
6	Impending extinction crisis of the world's primates: Why primates matter (2017)	Asociación Neotropical Primate Conservation Perú, Centre Suisse de Recherches Scientifiques en Côte d'Ivoire, Conservation International	Brazil, China, Côte d'Ivoire	—
7	People need freshwater biodiversity (2023)	Aalborg University, Cardiff University, Carleton University	Australia, Austria, Canada	Background
8	The Global Dam Watch database of river barrier and reservoir information for large-scale applications (2024)	Chinese Academy of Sciences, ENS-Lyon, European Commission Joint Research Centre	Canada, China, France	Background

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

FOLLOW-UP WORK

Scientists' warning to humanity on the freshwater biodiversity crisis

2021 · Ambio · 1,096 citations (GS)

Field-normalised: 677 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2021 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Human impacts on global freshwater fish biodiversity (2021)	INRAE, Aix Marseille Univ, Institute of Hydrobiology, Chinese Academy of Sciences, Qingdao National Laboratory for Marine Science and Technology	China, France	—
2	Bending the curve of global freshwater biodiversity loss: what are the prospects? (2025)	Cary Institute of Ecosystem Studies, The University of Hong Kong	China, United States	—
3	Food system impacts on biodiversity loss (2021)	Chatham House, University of Guelph	Canada, United Kingdom	—
4	Adapting agriculture to climate change via sustainable irrigation: biophysical potentials and feedbacks (2022)	Carnegie Institution for Science	United States	—
5	Scientists' warning–The outstanding biodiversity of islands is in peril (2021)	Goethe-University, Leiden University, Universidad de La Laguna	France, Germany, Netherlands	—
6	Threats, challenges and sustainable conservation strategies for freshwater biodiversity (2022)	Asian University for Women, HUTECH University, Sri Sivasubramaniya Nadar College of Engineering	Australia, Bangladesh, India	—
7	Implications of climate change on freshwater ecosystems and their biodiversity (2025)	Assam Agricultural University, E.G.S Pillay Engineering	India, Saudi Arabia, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
		College, Graphic Era Hill University		
8	The Impact of Population Growth on Natural Resources and Farmers' Capacity to Adapt to Climate Change in Low-Income Countries (2021)	—	—	Background
9	Lakes in the era of global change: moving beyond single-lake thinking in maintaining biodiversity and ecosystem services (2020)	—	—	—
10	Enhancing the bioconversion rate and end products of black soldier fly (BSF) treatment – A comprehensive review (2024)	Council for Scientific and Industrial Research, Gdansk University of Technology, German Institute of Food Technologies	Germany, Indonesia, Poland	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 2

Claim — Contribution 2

The researcher established a foundational framework for Neotropical freshwater fish biogeography, subsequently expanding this work to address critical biodiversity and conservation challenges in South America.

The researcher's contribution centers on a seminal 2011 book, 'Historical Biogeography of Neotropical Freshwater Fishes,' which appears to have provided a comprehensive synthesis of the evolutionary history and distribution patterns of these species. This core work serves as the intellectual foundation for the researcher's subsequent scholarship in the field.

This line of work appears to address the need for integrating historical biogeographical insights with contemporary conservation priorities. The progression from the 2011 core text to the 2016 follow-up paper, 'Fish biodiversity and conservation in South America,' suggests a deliberate effort to apply theoretical biogeographical frameworks to practical biodiversity management and conservation strategies in the region.

The significance of this contribution is evidenced by substantial citation metrics, with the core book accumulating 687 citations and the follow-up paper reaching 957 citations. Furthermore, analysis of citing literature indicates that 75.6% of citations originate from independent researchers, demonstrating that this work has been widely adopted and utilized by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Historical Biogeography of Neotropical Freshwater Fishes

2011 · University of California Press (book) · 687 citations (GS)

Field-normalised: 295 Semantic Scholar citations place it in the top 5% of Biology papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The nature of science: The fundamental role of natural history in ecology, evolution, conservation, and education (2023)	Auburn University, California Science Center, Dalhousie University	Brazil, Canada, United Kingdom	—
2	Can DNA barcoding accurately discriminate megadiverse Neotropical freshwater fish fauna? (2013)	State University of São Paulo	Brazil	Background
3	A synthesis of the diversity of freshwater fish migrations in the Amazon basin (2024)	—	—	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

FOLLOW-UP WORK

Fish biodiversity and conservation in South America

2016 · Journal of Fish Biology · 957 citations (GS)

Field-normalised: 620 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2016 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The fishes of the Amazon: distribution and biogeographical patterns, with a comprehensive list of species (2019)	Universidade de São Paulo, Universidade Federal da Grande Dourados	Brazil	Background
2	The changing hydrology of a dammed Amazon (2017)	University of Florida	United States	—
3	Rethinking fish biology and biotechnologies in the challenge era for burgeoning genome resources and strengthening food security (2022)	—	—	—
4	Ecosystem services generated by Neotropical freshwater fishes (2022)	Federal University of Tocantins, State University of Maringá	Brazil	Background

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 3

Claim — Contribution 3

The researcher established a foundational framework for the species diversity and phylogenetic systematics of American knifefishes, providing a critical reference for subsequent taxonomic and evolutionary studies.

The researcher's primary contribution is the comprehensive analysis of species diversity and phylogenetic systematics within American knifefishes, as detailed in the 2001 monograph published by the University of Michigan. This work serves as the central pillar of this research line, with no subsequent follow-up papers by the same author expanding directly on this specific title.

This line of work appears to address the need for a rigorous systematic classification of Gymnotiformes. By synthesizing diversity and phylogenetic data, the researcher likely provided a structured baseline for understanding the evolutionary relationships and taxonomic boundaries of this teleost group, filling a gap in the systematic literature at the time of publication.

The significance of this contribution is evidenced by its substantial citation record, with 412 citations indicating widespread reliance on this framework. Notably, 75.6% of the classified citing papers originate from independent researchers, suggesting that the work has been broadly adopted and utilized by the wider scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Species diversity and phylogenetic systematics of American knifefishes (Gymnotiformes, Teleostei)

2001 · Miscellaneous Publications Museum of Zoology, University of Michigan · 412 citations (GS)

Field-normalised: 215 Semantic Scholar citations place it in the top 10% of Biology papers from 2001 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Phylogenetic classification of living and fossil ray-finned fishes (Actinopterygii) (2024)	California Academy of Sciences, Santa Barbara Museum of Natural History, Yale University	United States	—
2	Family-group names of Recent fishes (2014)	California Academy of Sciences, Staatliches Museum für Naturkunde Stuttgart	Germany, United States	—
3	The energetics of electric organ discharge generation in gymnotiform weakly electric fish (2013)	Cape Breton University, Humboldt-Universität zu Berlin, University of Miami	Canada, Germany, United States	**Methodology**
4	Swimming performance of a bio-inspired robotic vessel with undulating fin propulsion (2018)	—	—	—
5	Assessment gaps and biases in knowledge of conservation status of fishes (2020)	University of Navarra, School of Sciences, Zoological Society of London	Spain, United Kingdom	—
6	500,000 fish phenotypes: The new informatics landscape for evolutionary and developmental biology of the vertebrate skeleton (2012)	National Evolutionary Synthesis Center, University of Oregon, University of South Dakota	United States	Background

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

METHODOLOGY The energetics of electric organ discharge generation in gymnotiform weakly electric fish

"...characters from over 215 documented species, gymnotiform fish constitute a clade of three pulse-type families (Gymnotidae, Rhamphichthyidae and Hypopomidae), and two wave-type families (Sternopygidae and Apteronotidae) (Table1) (Albert, 2001; Albert and Crampton, 2005; Crampton, 2011)."

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of Louisiana at Lafayette	United States	—	8
University of Washington	United States	SCImago #45 · THE 25 · QS 81	5
California Academy of Sciences	United States	SCImago #7072	3
Universidade de São Paulo	Brazil	SCImago #99 · THE 201–250 · QS 108	3
McGill University	Canada	SCImago #168 · THE =41 · QS 27	3
University of Amsterdam	Netherlands	SCImago #75 · THE =62 · QS 53	3
Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB)	Germany	—	3
Yale University	United States	SCImago #76 · THE 10 · QS 21	3
Universidade Federal da Grande Dourados	Brazil	SCImago #7285	2
The Nature Conservancy	United States	SCImago #2483	2
State University of Maringá	Brazil	SCImago #5236 · THE 1501+	2
Conservation International	United States	—	2
The University of Hong Kong	China	SCImago #195 · THE 33 · QS 11	2
King's College London	United Kingdom	THE 38 · QS 31	2
Cardiff University	United Kingdom	SCImago #664 · THE 201–250 · QS 181	2

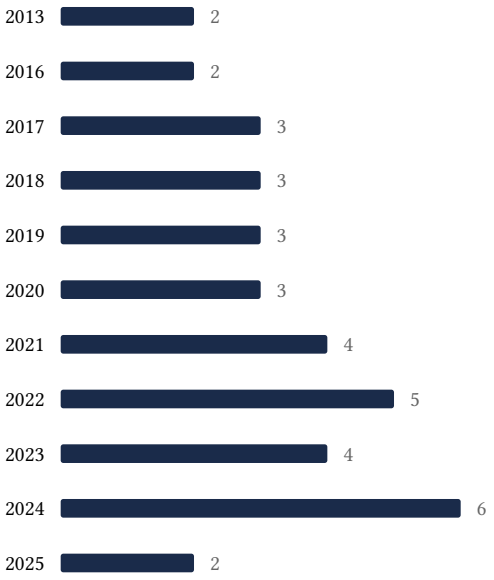
Geographic distribution of citing authors

Country	Citing papers
United States	28
Brazil	14
Germany	10
United Kingdom	9
Canada	8
China	8
Netherlands	6
France	5
India	4
Mexico	3
Sweden	3
Switzerland	3

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.



F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Balancing hydropower and biodiversity in the Amazon, Congo, and Mekong	18	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Historical Biogeography of Neotropical Freshwater Fishes	7	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Species diversity and phylogenetic systematics of American knifefishes (Gymnotiformes, Teleostei)	6	Dhanasar — Prong 2 (well-positioned)