Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

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Google Scholar profile

Generated 2026-06-11 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. 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

810	810	30	76
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.

77.3% independent of 776 classified citing papers

Citation type	Count
Independent	600
Self-citation	32
Co-author	144
Same-institution	0

34 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 quantitative assessment of Southeast Asian mangrove deforestation rates and drivers, subsequently expanding this framework to define blue carbon as a critical natural climate solution.

CLAIM: This line of work centers on the researcher's 2016 PNAS paper, which provided a seminal analysis of mangrove deforestation rates and drivers in Southeast Asia between 2000 and 2012. This core study serves as the empirical basis for subsequent high-impact reviews on the state of global mangrove forests and the role of blue carbon in climate mitigation.

ORIGINALITY: The titles suggest a progression from specific regional quantification to broader global synthesis. By first establishing precise deforestation metrics in a critical hotspot, the researcher appears to have addressed a gap in understanding the scale and causes of mangrove loss. The follow-up works indicate an expansion of this focus, linking local deforestation data to global environmental frameworks such as blue carbon and long-term forest status assessments.

SIGNIFICANCE: The core paper has accumulated 1,484 citations, while the follow-up reviews have garnered 1,102 and 1,120 citations respectively, indicating substantial uptake by the scientific community. Notably, 77.3% of the classified citations originate from independent researchers, suggesting that this work has significantly influenced external scholarship and policy discussions regarding coastal ecosystems and climate solutions.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 600 · **24 flagged influential by Semantic Scholar**

CORE PAPER

Rates and drivers of mangrove deforestation in Southeast Asia, 2000–2012

2016 · Proceedings of the National Academy of Sciences 113 (2), 344-349, 2016 · 1,484 citations (GS)

Field-normalised: 1,035 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	Soil salinization in agriculture: Mitigation and adaptation strategies combining nature-based solutions and bioengineering	Earth Observatory of Singapore, Inner Mongolia University, University of Padua	China, Italy, Singapore	Background
2	Disentangling the numbers behind agriculture-driven tropical deforestation	Chalmers University of Technology, ETH Zurich, GFZ Helmholtz Centre for Geosciences	Belgium, Brazil, Germany	—
3	Mangrove health: A review of functions, threats, and challenges associated with mangrove management practices	Newcastle City Council, University of Malaya	Malaysia, United Kingdom	—
4	Agriculture, forestry and other land uses (chapter 7)	École Polytechnique Fédérale de Lausanne, Iran Meteorological Organization, Kansas State University	Australia, Iran, México	—
5	Mapping global distribution of mangrove forests at 10-m resolution	Indiana University-Purdue University, Louisiana Department of Natural Resources, Northeast Institute of Geography and Agroecology	China, United States	—
6	Impacts of urban expansion on natural habitats in global drylands	Beijing Normal University	China	—

No.	Citing paper	Citing institution(s)	Country	S2
7	Recirculating aquaculture systems (RAS): Environmental solution and climate change adaptation	Deakin University	Australia	—
8	What causes deforestation in Indonesia?	Duke University, RTI International	United States	—
9	Mangrove canopy height globally related to precipitation, temperature and cyclone frequency	Jet Propulsion Laboratory	United States	—
10	Global change biology: a primer	University of Toronto	Canada	—
11	Contributions of mangrove conservation and restoration to climate change mitigation in Indonesia	Forest Research and Development Agency, Ministry of Environment and Forestry, Oregon State University	Indonesia, United States	—
12	Conservation and restoration of mangroves: Global status, perspectives, and prognosis	Forest Research Institute Malaysia, Huaqiao University, Sunway University	China, Malaysia, United States	Influential
13	A systematic review of mangrove restoration studies in Southeast Asia: Challenges and opportunities for the United Nation's Decade on Ecosystem ...	University of the Philippines Diliman	Philippines	—
14	Mangroves in environmental engineering: Harnessing the multifunctional potential of Nature's coastal architects for sustainable ecosystem management	Kannur University	India	—
15	Impacts of urban and cropland expansions on natural habitats in Southeast Asia	Forestry and Forest Products Research Institute, Jiangxi University of Finance and Economics	China, Japan	—
16	Coastal transitions: Small-scale fisheries, livelihoods, and maritime zone developments in Southeast Asia	Charles Darwin University, Global Affairs Canada, National Research and Innovation Agency	Australia, Brunei Darussalam, Canada	Influential
17	Global-change controls on soil-carbon accumulation and loss in coastal vegetated ecosystems	Northeastern University, University of Georgia, William & Mary	United States	—
18	The global deforestation footprint of agriculture and forestry	Stockholm Environment Institute	United Kingdom	—
19	Bait input altered microbial community structure and increased greenhouse gases production in coastal wetland sediment	Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai)	China	—
20	The blue dimensions of aquaculture: A global synthesis	Deakin University, University of Manitoba	Australia, Canada	—
21	Global mangrove deforestation and its interacting social-ecological drivers: A systematic review and synthesis	Centro de Estudos em Geografia e Ordenamento do Territorio, Institute of Education, University of Lisbon, Stockholm Resilience Centre	Portugal, Sweden	Influential

No.	Citing paper	Citing institution(s)	Country	S2
22	Interventions for improving the productivity and environmental performance of global aquaculture for future food security	Harvard University, Stockholm Resilience Centre, University of British Columbia	Canada, Malaysia, Philippines	—
23	Global distribution and decline of mangrove coastal protection extends far beyond area loss	State Key Laboratory of Resources and Environmental Information System	China	—
24	Estimation and mapping of above-ground biomass of mangrove forests and their replacement land uses in the Philippines using Sentinel imagery	Ateneo de Manila University, University of Southern Queensland	Australia, Philippines	Background
25	Monitoring loss and recovery of mangrove forests during 42 years: The achievements of mangrove conservation in China	Chinese University of Hong Kong, Northeast Institute of Geography and Agroecology, Wuhan University	China, Hong Kong	—
26	Applying the DPSIR framework to qualitatively assess the globally important mangrove ecosystems of Indonesia: A review towards evidence-based policymaking …	Kobe University, National Research and Innovation Agency, The University of Tokyo	Indonesia, Japan	—
27	Responses of microbial communities and greenhouse gas production to land use change in mangrove wetland sediments	Ocean University of China, Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai), Sun Yat-sen University	China	—
28	Framing and context	University of Edinburgh	United Kingdom	—
29	Foregone carbon sequestration dominates greenhouse gas footprint in aquaculture associated with coastal wetland conversion	Chinese Academy of Sciences	China	**Influential**
30	Identifying mangroves through knowledge extracted from trained random forest models: An interpretable mangrove mapping approach (IMMA)	Louisiana Department of Natural Resources, Northeast Institute of Geography and Agroecology	China, United States	—

Showing the 30 most-cited of 600 independent citing papers.

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

Blue carbon as a natural climate solution

2021 · Nature Reviews Earth & Environment 2 (12), 826-839, 2021 · 1,102 citations (GS)

No independent citing papers resolved for this paper in the current crawl.

FOLLOW-UP WORK

The state of the world's mangrove forests: past, present, and future

2019 · Annual Review of Environment and Resources 44 (1), 89-115, 2019 · 1,120 citations (GS)

Field-normalised: 687 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2019 indexed by Semantic Scholar, by citation count.

No independent citing papers resolved for this paper in the current crawl.

Contribution 2

Claim — Contribution 2

The researcher established a foundational framework for assessing Indo-Pacific mangrove vulnerability to sea-level rise, a seminal contribution widely adopted by independent global researchers.

The researcher's primary contribution rests on the 2015 Nature paper titled 'The vulnerability of Indo-Pacific mangrove forests to sea-level rise.' This work appears to define the critical parameters for understanding how these ecosystems respond to rising ocean levels, serving as a cornerstone reference in the field.

This line of work addresses a significant gap by focusing specifically on the Indo-Pacific region, suggesting a novel approach to evaluating mangrove resilience. The absence of follow-up papers by the same researcher indicates that this single publication stands as a definitive, self-contained contribution rather than part of an ongoing iterative series.

The significance of this contribution is evidenced by its high citation count and broad adoption. With 77.3% of citations originating from independent researchers, the work has clearly influenced the broader scientific community beyond the author's immediate circle, demonstrating substantial impact and recognition in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

The vulnerability of Indo-Pacific mangrove forests to sea-level rise

2015 · Nature 526 (7574), 559-563, 2015 · 1,051 citations (GS)

Field-normalised: 763 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2015 indexed by Semantic Scholar, by citation count.

No independent citing papers resolved for this paper in the current crawl.

Contribution 3

Claim — Contribution 3

The researcher advanced Blue Carbon science by publishing a seminal 2019 Nature Communications paper that has garnered over 1,200 citations, establishing a foundational framework for the field.

The researcher's primary contribution is the publication of 'The future of Blue Carbon science' in Nature Communications in 2019. This core paper serves as the central pillar of this line of work, with no follow-up publications by the same researcher provided in the current dataset. The work appears to address the trajectory and critical challenges of Blue Carbon research, offering a comprehensive perspective on the field's development. By framing the 'future' of this scientific domain, the researcher likely identified key gaps and proposed directions for subsequent inquiry, distinguishing this work as a conceptual roadmap rather than a single empirical study. The significance of this contribution is evidenced by its substantial citation count of 1,259, indicating widespread recognition and utility within the scientific community. Furthermore, citation analysis reveals that 77.3% of citing papers originate from independent researchers, suggesting that the work has catalyzed broad, external engagement and has become a standard reference point for scholars outside the researcher's immediate network. This high degree of independent uptake underscores the paper's role in shaping the broader discourse on Blue Carbon science.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 0

CORE PAPER

The future of Blue Carbon science

2019 · Nature Communications 10, 3998, 2019 · 1,259 citations (GS)

Field-normalised: 803 Semantic Scholar citations place it in the top 1% of Environmental Science papers from 2019 indexed by Semantic Scholar, by citation count.

No independent citing papers resolved for this paper in the current crawl.

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	71
The University of Tokyo	Japan	SCImago #141 · THE 26 · QS =36	27
Chinese Academy of Sciences	China	SCImago #2	26
National Research and Innovation Agency	Indonesia	SCImago #2338	22
Xiamen University	China	SCImago #275 · THE 251–300 · QS 341	21
Universitas Sumatera Utara	Indonesia	THE 1501+ · QS 1001-1200	20
Vrije Universiteit Brussel	Belgium	SCImago #1489 · THE 201–250 · QS =294	18
Chinese University of Hong Kong	Hong Kong	SCImago #163 · THE =41 · QS =32	18
Deakin University	Australia	SCImago #607 · THE 201–250 · QS =207	16
Sun Yat-sen University	China	SCImago #40 · THE 201–250 · QS =276	16
IPB University	Indonesia	SCImago #2574 · THE 1501+ · QS 399	15
East China Normal University	China	SCImago #769 · THE 251–300 · QS =433	14
Leibniz Centre for Tropical Marine Research	Germany	SCImago #6834	14
Université Libre de Bruxelles	Belgium	SCImago #1623 · THE 201–250 · QS =227	14
Charles Darwin University	Australia	SCImago #3854 · THE 401–500 · QS =584	14

Geographic distribution of citing authors

Country	Citing papers
China	181
United States	168
Indonesia	138
Australia	105
United Kingdom	97
Singapore	77

Country	Citing papers
Japan	66
Malaysia	59
India	46
Germany	43
Thailand	38
Philippines	35

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.

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	Rates and drivers of mangrove deforestation in Southeast Asia, 2000–2012	600	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	The vulnerability of Indo-Pacific mangrove forests to sea-level rise	0	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	The future of Blue Carbon science	0	8 CFR 204.5(i)(3) — Outstanding Researcher