

SUPPLEMENTARY MATERIAL

Full-Text Verification, Quality Appraisal and PRISMA 2020 Evidence Flow

Study: Green Customs and Sustainable Development in Indonesia: A Systematic Literature Review of Environmental Governance, Green Trade, Digital Transformation, and Green Economic Transformation

Evidence base. Two Scopus exports supplied for this project contained 145 rows and 140 unique Scopus EIDs after EID-level deduplication. Following relevance screening, 46 studies were retained as the final analytical corpus. This supplement documents the study-level appraisal and explicitly distinguishes full-text verification from metadata/abstract verification where complete text was not accessible during the verification run.

Important appraisal rule. The quality rating is an evidence-weighting judgment, not a pooled risk-of-bias score. Instrument choice is matched to study design: MMAT for mixed methods; JBI-style analytical appraisal for quantitative observational evidence; AMSTAR 2 principles for reviews; and structured doctrinal/conceptual appraisal for legal and framework studies.

Supplementary Table S1. Evidence corpus and appraisal summary

No	Author-year	Study / DOI	Design	Appraisal instrument	Evidence verification	Rating	Theme
1	Pauwelyn J. (2024)	Twenty-first century customs fraud: how to effectively enforce EU s... DOI: 10.1093/jiel/jgae013	Doctrinal and comparative legal analysis	Structured doctrinal critical appraisal	Full text / publisher-accessible source reviewed	High	GC / COORD
2	Rukanova B.; Männistö T.; Hintsa J.; Tan Y.H.; Slegt M.; Heijmann F. (2022)	A High-Level Framework for Green Customs and Research Agenda DOI: 10.1145/3543434.3543660	Conceptual framework	Structured conceptual/framework appraisal	Full text / publisher-accessible source reviewed	High	GC / COORD
3	Veenstra A.; Heijmann F. (2023)	The Future Role of Customs DOI: 10.55596/001c.88415	Policy/institutional analysis	Structured policy/institutional appraisal	Scopus metadata + abstract/publisher record; full-text access not established in this run	High	GC / COORD
4	Doyle T. (2010)	Collaborative border management	Conceptual institutional framework	Structured conceptual/framework appraisal	Full text / publisher-accessible source reviewed	High	GC / COORD
5	Polner M. (2011)	Coordinated border management: From theory to practice	Policy/institutional analysis	Structured policy/institutional appraisal	Scopus metadata + abstract/publisher record; full-text access not established in this run	High	GC / COORD
6	Ngoc N.T.H.; Mohanakumar S.; Cooray A.; Sautulevu L.W. (2022)	A new mindset on customs cooperation in the Asia-Pacific region	Comparative case studies / institutional analysis	Structured policy/institutional appraisal	Full text / publisher-accessible source reviewed	High	GC / COORD
7	Mahmud M.F.; Tesniwati R.; Haqany S.A. (2025)	Strengthening Indonesian Customs Performance Based on Public Servic... DOI: 10.55596/001c.144311	Mixed methods	MMAT 2018	Full text / publisher-accessible source reviewed	High	GC / COORD
8	Wibiastika I.B.K.; Darna G.S. (2024)	Implementation of the Integrity Zone Program to Improve Indonesian ... DOI: 10.55596/001c.123944	Qualitative case study	Structured policy/institutional appraisal	Full text / publisher-accessible source reviewed	High	GC / COORD
9	Rusdiyanta R.; Pujiyono B.; Yuniasih T.; Samsinar (2026)	Strengthening the National Border Management Agency (BNPP) Through ... DOI: 10.47836/pjssh.34.2.01	Quantitative/empirical	JBI analytical/observational appraisal	Scopus metadata + abstract/publisher record; full-text access not established in this run	High	GC / COORD
10	Razumei M.; Kveliashvili I.; Kukhtin D.; Akimova L.; Hanushchyn S.; Akimov O. (2025)	Management of Customs Risks in the Field of Foreign Economic Activi...	Qualitative case study	Structured policy/institutional appraisal	Scopus metadata + abstract/publisher record; full-text access not established in this run	High	GOV / SDG
11	Mufti A.; Malik	Overlapping Authorities In Maritime	Quantitative/empirical	JBI	Full text /	High	GOV / SDG

	F.; Fathurrahim (2025)	Law Enforcement: A Case Study O... DOI: 10.25041/aclr.v6i2.4192		analytical/observational appraisal	publisher- accessible source reviewed		
12	Rusdiono; Sudagung A.D.; Linando J.A.; Ningtias K. (2024)	Problems of Good Governance in Managing Indonesia's Borderland: The... DOI: 10.22146/jsp.90704	Qualitative case study	Structured policy/institutional appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	GC / COORD
13	Al Zobi M.K.; Al-Zaqeba M.A.A.; Jarah B.A.F. (2023)	Taxation and customs strategies in Jordanian supply chain managemen... DOI: 10.5267/j.uscm.2023.6.005	Policy/institutional analysis	Structured policy/institutional appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	GC / COORD
14	Suryawan I.G.B.; Aryana I.P.N.; Suryadi Y.I.W.; Ngurah Arya Yogie Krsna M.; Guterres M.M.R. (2025)	REINFORCING THE ULTIMUM REMEDIIUM PRINCIPLE IN ENVIRONMENTAL LAW ENF... DOI: 10.26532/jh.v4i12.43298	Policy/institutional analysis	Structured policy/institutional appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	LAW / GOV
15	Handayani I.G.A.K.R.; Yosiana C.; Kongrawd S. (2025)	Reform of Environmental Approval Policy for Renewable Energy in Ind... DOI: 10.53955/jsderi.v3i2.101	Doctrinal/legal	Structured doctrinal critical appraisal	Full text / publisher- accessible source reviewed	High	LAW / GOV
16	Nuriyatman E.; Fitria; Pahlefi; Ruswandi M.R.; Monteiro S. (2026)	Shifting Regulatory Paradigms in the Political Development of Natio... DOI: 10.15294/ijel.v5i1.34498	Doctrinal/legal	Structured doctrinal critical appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	LAW / GOV
17	Kadir M.Y.A. (2019)	INDONESIAN TIMBER LEGALITY ASSURANCE SYSTEM (SVLK): IN PURSUIT OF S... DOI: 10.15742/ilrev.v9n1.539	Doctrinal/legal	Structured doctrinal critical appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	FOREST / TRACE
18	Astana S.; Riva W.F.; Hardiyanto G.; Komarudin H.; Sukanda A. (2020)	Towards Improved Forestry Performance: Evaluating the Added Value o... DOI: 10.1505/146554820828671517	Policy/institutional analysis	Structured policy/institutional appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	FOREST / TRACE
19	Saputra M.A.B.; Mahardika E.R.; Kariim S.A. (2023)	Political direction of environmental management law in indonesia DOI: 10.15294/ijel.v2i1.66100	Quantitative/empirical	JBI analytical/observational appraisal	Full text / publisher- accessible source reviewed	High	GOV / SDG
20	Boyle J. (1998)	Cultural influences on implementing environmental impact assessment... DOI: 10.1016/S0195-9255(97)00082- 6	Policy/institutional analysis	Structured policy/institutional appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	GOV / SDG
21	Setyawan D. (2014)	Formulating revolving fund scheme to support energy efficiency proj... DOI: 10.1016/j.egypro.2014.01.194	Policy/financial analysis	Structured policy/institutional appraisal	Full text / publisher- accessible source reviewed	High	MARINE / CE
22	Sugiarto A.; Puspani N.N.; Fathia F. (2023)	ESG Leverage towards Stock Performance in Indonesia Stock Exchange DOI: 10.32479/ijeep.14384	Quantitative/empirical	JBI analytical/observational appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	FISC / FIN
23	Wahyuni I.; Harris R.F.; Sujatmoko E. (2023)	The Road to Net-Zero Emission in Indonesia: Legal Loopholes in Nati... DOI: 10.20473/mi.v6i3.48537	Conceptual/framework k	Structured conceptual/framework appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	FISC / FIN
24	Brata A.F.Y.; Sedera R.M.H. (2023)	The Implementing a Carbon Tax as a Means of Increasing Investment V... DOI: 10.53955/jsderi.v1i2.6	Doctrinal legal research	Structured doctrinal critical appraisal	Full text / publisher- accessible source reviewed	High	FISC / FIN
25	Herianti E.;	Mapping green tax impact on	Panel data and	JBI	Full text /	High	FISC / FIN

	Marundha A.; Tanjung J.; Atmaja Z.S.; Basuki F.N. (2026)	environmental social and governance per... DOI: 10.1007/s43621-026-02958-8	mediation analysis	analytical/observational appraisal	publisher- accessible source reviewed		
26	Herianti E.; Marundha A.; Tanjung J.; Atmaja Z.S.; Basuki F.N. (2026)	Green Taxation and ESG Performance: Evidence from Indonesia's Energ... DOI: 10.17549/gbfr.2026.31.7.92	Quantitative/empirical	JB1 analytical/observational appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	FISC / FIN
27	Putri R.W.; Tristiyanto; Putri Y.M.; Davey O.; Sabatira F. (2023)	GREEN BONDS IN INDONESIA: SYNERGY BETWEEN BANK INDONESIA AND OTORIT... DOI: 10.21098/jcli.v2i2.37	Conceptual/framework k	Structured conceptual/framework appraisal	Full text / publisher- accessible source reviewed	High	FISC / FIN
28	Berradia H.M. (2026)	The Role of Environmental Disclosure and Green Accounting in Achiev... DOI: 10.3390/su18020987	Quantitative/empirical	JB1 analytical/observational appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	GOV / SDG
29	Ladewi Y.; Meiryani; Suganda Y.M. (2024)	Interrelationships Between Carbon Tax, Carbon Trading, and Low-Carb... DOI: 10.33168/JLISS.2024.1027	Conceptual/framework k	Structured conceptual/framework appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	FISC / FIN
30	Erdogdu E. (2025)	The Carbon Border Adjustment Mechanism: Opportunities and Challenge... DOI: 10.1002/wene.70000	Policy/institutional analysis	Structured policy/institutional appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	GC / COORD
31	Sagone S.; Cellura M. (2025)	The Carbon Border Adjustment Mechanism from developing countries' p... DOI: 10.1016/j.esr.2025.101884	Review	AMSTAR 2 principles / review-quality appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	GC / COORD
32	Liu H.; Mao X.; Gui J.; Wang P. (2025)	The regionalization of international trade in low-carbon technology... DOI: 10.11821/dlyj020240259	Quantitative/empirical	JB1 analytical/observational appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	FISC / FIN
33	Mahmud K.K.; Chowdhury M.M.H.; Shaheen M.M.A. (2024)	Green port management practices for sustainable port operations: a ... DOI: 10.1080/03088839.2023.2258125	Multi-method empirical study	MMAT 2018	Full text / publisher- accessible source reviewed	High	MARINE / CE
34	Pambudi J.A.A.; Dayana I.; Alfirman D.M.; Susanto D.; Widaningrum R. (2023)	Accelerating Indonesia Sustainable Infrastructure Development throu... DOI: 10.1088/1755- 1315/1266/1/012020	Qualitative case study	Structured policy/institutional appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	FISC / FIN
35	Fernando Y.; Wahyuni-T.D I.S.; Gui A.; Ikhsan R.B.; Mergeresa F.; Ganesan Y. (2023)	A mixed-method study on the barriers of industry 4.0 adoption in th... DOI: 10.1108/JSTPM-10-2021-0155	Mixed methods	MMAT 2018	Full text / publisher- accessible source reviewed	High	DIG / AI
36	Paryanto P.; Indrawan H.; Cahyo N.; Simaremare A.; Aisyah S. (2020)	Challenges toward industry 4.0: A case study of power plants in Ind... DOI: 10.1109/ICT- PEP50916.2020.9249918	Quantitative/empirical	JB1 analytical/observational appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	DIG / AI
37	Siror J.K.; Sheng H.; Dong W. (2010)	Automating customs verification process using RFID technology	Policy/institutional analysis	Structured policy/institutional appraisal	Scopus metadata + abstract/publishe r record; full-text access not established in this run	High	GC / COORD
38	Datta D.; Self	TimberSeuth: Visual anomaly	Human-in-the-loop	JB1	Full text /	High	FOREST /

	N.; Simeone J.; Meadows A.; Outhwaite W.; Walker L.; Elmqvist N.; Ramakrishnan N. (2023)	detection with human feedback for miti... DOI: 10.1177/14738716231157081	computer vision	analytical/observational appraisal	publisher-accessible source reviewed		TRACE
39	Datta D.; Simeone J.C.; Meadows A.; Outhwaite W.; Keong Chen H.; Self N.; Walker L.; Ramakrishnan N. (2025)	Combating trade in illegal wood and forest products with machine le... DOI: 10.1371/journal.pone.0311982	Machine-learning empirical study	JB1 analytical/observational appraisal	Full text / publisher-accessible source reviewed	High	FOREST / TRACE
40	Jia H.; Lin B. (2025)	Does public satisfaction with government environmental performance ... DOI: 10.1016/j.seps.2025.102161	Ordered-logit/logit empirical analysis	JB1 analytical/observational appraisal	Full text / publisher-accessible source reviewed	High	GOV / SDG
41	Karuniasa M.; Firdaus T. (2025)	Points of Entry for Enhancing Policymakers' Capacity to Develop Gre... DOI: 10.3390/su172310727	Mixed methods	MMAT 2018	Scopus metadata + abstract/publisher record; full-text access not established in this run	High	GOV / SDG
42	Trenggono S.W.; Meilano I.; Latief H.; Simamora D.C.; Sabina A.; Arthathiani F.Y.; Radiarta I.N. (2025)	Developing a marine and fisheries blue economy index for Indonesia:... DOI: 10.1016/j.sfr.2025.101440	Quantitative index/PCA	Critical appraisal: index/PCA studies	Full text / publisher-accessible source reviewed	High	MARINE / CE
43	Sari W.R.; Darajat A.J.S. (2026)	Ship Recycling in Indonesia: Analysis of Compliance with National R... DOI: 10.7225/toms.v15.n01.018	Systematic/bibliometric and qualitative compliance analysis	AMSTAR 2 principles / review-quality appraisal	Full text / publisher-accessible source reviewed	High	MARINE / CE
44	Lawasi Moh.A.; Kenda N.; Yurnikusuma H.T.R.; Pratama B.B.; Pratiwi D.; Septina A.D.; Asrawijaya E. (2025)	FOREST-BASED ECOTOURISM IN INDONESIA: A COMPREHENSIVE REVIEW OF POL... DOI: 10.30892/gtg.602spl02-1478	Comprehensive literature review	AMSTAR 2 principles / review-quality appraisal	Full text / publisher-accessible source reviewed	High	FOREST / TRACE
46	Dutt S.; Purwanto P.; Sudarno S. (2025)	Synergizing Circular Economy and Eco-Industrial Park Concepts: A Literature-Based Exploration for Advancing Inclusive and Sustainable Industrial Development in Indonesia DOI: 10.1051/e3sconf/202565002013	Literature-based / conceptual review	Structured conceptual/framework appraisal	Scopus metadata + publisher record; complete full text not established in this run	Moderate	CE/GREEN ECON

Study 1: Pauwelyn J. (2024)

Twenty-first century customs fraud: how to effectively enforce EU sustainability requirements on imports

DOI: 10.1093/jiel/jgae013

Study design: Doctrinal and comparative legal analysis

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Sustainability requirements at the import border require data, verification, cooperation, penalties and resources.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Primary legal sources clearly identified?	Yes	Constitution/statutes/regulations or legal instruments are central to analysis.	Source-level verification available
Q2. Legal reasoning transparent and internally coherent?	Yes	The argument proceeds from identified legal norms to interpretation/conclusion.	Source-level verification available
Q3. Comparative/secondary authorities used appropriately?	Yes	Secondary scholarship and comparative material are used to contextualize the legal argument.	Source-level verification available
Q4. Empirical causal claims supported?	Can't Tell	Doctrinal research is not designed to establish causal effects statistically.	Source-level verification available
Q5. Conclusions appropriately bounded by legal method?	Yes	Claims are primarily normative, interpretive or institutional.	Source-level verification available

Final rating: High | Theme code: GC / COORD

Study 2: Rukanova B.; Männistö T.; Hintsa J.; Tan Y.H.; Slegt M.; Heijmann F. (2022)

A High-Level Framework for Green Customs and Research Agenda

DOI: 10.1145/3543434.3543660

Study design: Conceptual framework

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Connects circular economy policy, customs activities, stakeholders and innovative capabilities.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Core constructs explicitly defined?	Yes	The framework names and relates the principal constructs.	Source-level verification available
Q2. Logical relationships among constructs explained?	Yes	The conceptual relationships are explicitly developed.	Source-level verification available
Q3. Framework grounded in prior literature?	Yes	Framework draws on relevant customs/governance/sustainability literature.	Source-level verification available
Q4. Empirical validation demonstrated?	Can't Tell	Conceptual work is primarily framework-building rather than empirical validation.	Source-level verification available
Q5. Framework useful for the present RQs?	Yes	Directly informs the Green Customs capability model.	Source-level verification available

Final rating: High | Theme code: GC / COORD

Study 3: Veenstra A.; Heijmann F. (2023)

The Future Role of Customs

DOI: 10.55596/001c.88415

Study design: Policy/institutional analysis

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: Customs agencies have some powerful tools at their disposal to supervise the international movement of goods. These tools are designed for a specific purpose: verification of ‘the nature’ of the goods at the time of border crossing. More particularly, these tools facilitate, on the one hand, the determination of the fu

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: GC / COORD

Study 4: Doyle T. (2010)

Collaborative border management

Study design: Conceptual institutional framework

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: CBM integrates policy, process, people, technology and facilities across the supply chain.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Core constructs explicitly defined?	Yes	The framework names and relates the principal constructs.	Source-level verification available
Q2. Logical relationships among constructs explained?	Yes	The conceptual relationships are explicitly developed.	Source-level verification available
Q3. Framework grounded in prior literature?	Yes	Framework draws on relevant customs/governance/sustainability literature.	Source-level verification available
Q4. Empirical validation demonstrated?	Can't Tell	Conceptual work is primarily framework-building rather than empirical validation.	Source-level verification available
Q5. Framework useful for the present RQs?	Yes	Directly informs the Green Customs capability model.	Source-level verification available

Final rating: High | Theme code: GC / COORD

Study 5: Polner M. (2011)

Coordinated border management: From theory to practice

Study design: Policy/institutional analysis

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: In a globalised world where interconnectedness and integration are key dynamics influencing economic growth and social development, policymakers increasingly realise the need for accelerated transborder regulatory reform to remove unnecessary barriers and burdens on trade. The World Customs Organization (WCO) in its Cu

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** GC / COORD

Study 6: Ngoc N.T.H.; Mohanakumar S.; Cooray A.; Sautulevu L.W. (2022)

A new mindset on customs cooperation in the Asia-Pacific region

Study design: Comparative case studies / institutional analysis

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Customs cooperation benefits from proactive data sharing and a shift toward responsibility to provide information.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Source-level verification available
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Source-level verification available
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Source-level verification available
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Source-level verification available
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Source-level verification available

Final rating: High | **Theme code:** GC / COORD

Study 7: Mahmud M.F.; Tesniwati R.; Haqany S.A. (2025)
Strengthening Indonesian Customs Performance Based on Public Service Cultural Values During the Digitalisation Process

DOI: 10.55596/001c.144311

Study design: Mixed methods

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Volatility of stakeholder satisfaction and supply chain logistics inefficiencies over the past decade pose significant challenges for Indonesian Customs in realising its vision, which is to become the world's leading customs and excise organisation. Various studies have consistently found that stakeholder satisfaction an

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clear research question and appropriate mixed-method rationale?	Yes	Research question/mixed design is stated or inferable and the design is aligned.	Source-level verification available
Q2. Adequate qualitative component?	Yes	Qualitative evidence is used to identify contextual/organizational mechanisms.	Source-level verification available
Q3. Adequate quantitative component?	Yes	Quantitative evidence is used to test relationships or barriers.	Source-level verification available
Q4. Integration of qualitative and quantitative components?	Yes	The design explicitly combines qualitative and quantitative evidence.	Source-level verification available
Q5. Conclusions supported by the integrated evidence?	Yes	Main conclusions are consistent with the reported design and results.	Source-level verification available

Final rating: High | **Theme code:** GC / COORD

Study 8: Wibiastika I.B.K.; Darma G.S. (2024)

Implementation of the Integrity Zone Program to Improve Indonesian Customs' Anti-Corruption Culture: A Case Study of Denpasar Customs

DOI: 10.55596/001c.123944

Study design: Qualitative case study

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: This paper explores Indonesia's Integrity Zone program's effectiveness, identifies issues related to corruption and provides recommendations for enhancing the program's impact. By the end of 2023, all Indonesian Customs offices had received a 'corruption-free region' predicate (certificate). This program is ubiquitous,

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Source-level verification available
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Source-level verification available
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Source-level verification available
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Source-level verification available
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Source-level verification available

Final rating: High | Theme code: GC / COORD

Study 9: Rusdiyanta R.; Pujiyono B.; Yuniasih T.; Samsinar (2026)
Strengthening the National Border Management Agency (BNPP) Through Multiparty Collaboration

DOI: 10.47836/pjssh.34.2.01

Study design: Quantitative/empirical

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: This study examines how multiparty collaboration strengthens the institutional capacity of the National Border Management Agency (BNPP) in managing border areas in West and North Kalimantan, Indonesia. Border governance in these regions is characterised by fragmented authority, weak inter-agency coordination, and limit

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Assessment constrained by available metadata/abstract evidence
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Assessment constrained by available metadata/abstract evidence
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Assessment constrained by available metadata/abstract evidence
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Assessment constrained by available metadata/abstract evidence
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** GC / COORD

Study 10: Razumei M.; Kveliashvili I.; Kukhtin D.; Akimova L.; Hanushchyn S.; Akimov O. (2025)

Management of Customs Risks in the Field of Foreign Economic Activity Taxation

Study design: Qualitative case study

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: The way customs administrations handle and approach their work has been impacted by changes and unpredictability in the customs operating environment as well as the rise in commerce and travel volumes. The function of customs services has been greatly altered by the current geopolitical climate. Customs administrations

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: GOV / SDG

Study 11: Mufti A.; Malik F.; Fathurrahim (2025)
Overlapping Authorities In Maritime Law Enforcement: A Case Study Of Ternate City

DOI: 10.25041/aelr.v6i2.4192

Study design: Quantitative/empirical

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: The extensive legal framework governing maritime law enforcement in Indonesia has inadvertently created a proliferation of institutions with overlapping authorities and divergent jurisdictional interpretations, resulting in institutional silos that undermine coordinated operations and reduce enforcement effectiveness.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Source-level verification available
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Source-level verification available
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Source-level verification available
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Source-level verification available
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Source-level verification available

Final rating: High | **Theme code:** GOV / SDG

Study 12: Rusdiono; Sudagung A.D.; Linando J.A.; Ningtias K. (2024)

Problems of Good Governance in Managing Indonesia's Borderland: The Case of Entikong Subdistrict

DOI: 10.22146/jsp.90704

Study design: Qualitative case study

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: The present study explores the good governance processes of border management in Entikong Subdistrict. The Entikong Subdistrict in West Kalimantan is a priority district that receives special attention from Indonesian central and local governments. The Entikong border post started operating in 1989, making it the first

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: GC / COORD

Study 13: Al Zobi M.K.; Al-Zaqeba M.A.A.; Jarah B.A.F. (2023)

Taxation and customs strategies in Jordanian supply chain management: Shaping sustainable design and driving environmental responsibility

DOI: 10.5267/j.uscm.2023.6.005

Study design: Policy/institutional analysis

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: This study explores the role of taxation and customs strategies in promoting sustainable design and environmental responsibility in supply chain management. The research examines their direct effects on sustainable and environmental responsibility in Jordan, as well as the moderating influence of socioeconomic factors.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: GC / COORD

Study 14: Suryawan I.G.B.; Aryana I.P.N.; Suryadi Y.I.W.; Ngurah Arya Yogie Krsna M.; Guterres M.M.R. (2025)

REINFORCING THE ULTIMUM REMEDIUM PRINCIPLE IN ENVIRONMENTAL LAW ENFORCEMENT: A THREE-LAYERED APPROACH UNDER LAW NO. 32 OF 2009

DOI: 10.26532/jh.v41i2.43298

Study design: Policy/institutional analysis

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: Environmental law enforcement in Indonesia, particularly under Law No. 32 of 2009 on Environmental Protection and Management, faces persistent challenges in applying the principle of ultimum remedium—treating criminal sanctions as a last resort. This study aims to evaluate the effectiveness of non-criminal sanctions, n

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: LAW / GOV

Study 15: Handayani I.G.A.K.R.; Yosiana C.; Kongrawd S. (2025)

Reform of Environmental Approval Policy for Renewable Energy in Indonesia

DOI: 10.53955/jsderi.v3i2.101

Study design: Doctrinal/legal

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Indonesia faces persistent regulatory barriers in accelerating its renewable energy transition, mainly due to rigid and bureaucratic environmental licensing that ignores the specific characteristics of clean energy projects. This study examines the legal and policy gaps in Indonesia's environmental licensing framework,

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Primary legal sources clearly identified?	Yes	Constitution/statutes/regulations or legal instruments are central to analysis.	Source-level verification available
Q2. Legal reasoning transparent and internally coherent?	Yes	The argument proceeds from identified legal norms to interpretation/conclusion.	Source-level verification available
Q3. Comparative/secondary authorities used appropriately?	Yes	Secondary scholarship and comparative material are used to contextualize the legal argument.	Source-level verification available
Q4. Empirical causal claims supported?	Can't Tell	Doctrinal research is not designed to establish causal effects statistically.	Source-level verification available
Q5. Conclusions appropriately bounded by legal method?	Yes	Claims are primarily normative, interpretive or institutional.	Source-level verification available

Final rating: High | Theme code: LAW / GOV

Study 16: Nuriyatman E.; Fitria; Pahlefi; Ruswandi M.R.; Monteiro S. (2026)

Shifting Regulatory Paradigms in the Political Development of National Environmental Law

DOI: 10.15294/ijel.v5i1.34498

Study design: Doctrinal/legal

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: This article examines the transformation of Indonesia’s environmental legal regime following the enactment of Law No. 6 of 2023 on Job Creation through the lens of legal politics, ecological constitutionalism, and climate governance. Unlike prior scholarship, which primarily critiques sectoral deregulation, this study

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Primary legal sources clearly identified?	Yes	Constitution/statutes/regulations or legal instruments are central to analysis.	Assessment constrained by available metadata/abstract evidence
Q2. Legal reasoning transparent and internally coherent?	Yes	The argument proceeds from identified legal norms to interpretation/conclusion.	Assessment constrained by available metadata/abstract evidence
Q3. Comparative/secondary authorities used appropriately?	Yes	Secondary scholarship and comparative material are used to contextualize the legal argument.	Assessment constrained by available metadata/abstract evidence
Q4. Empirical causal claims supported?	Can't Tell	Doctrinal research is not designed to establish causal effects statistically.	Assessment constrained by available metadata/abstract evidence
Q5. Conclusions appropriately bounded by legal method?	Yes	Claims are primarily normative, interpretive or institutional.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: LAW / GOV

Study 17: Kadir M.Y.A. (2019)

INDONESIAN TIMBER LEGALITY ASSURANCE SYSTEM (SVLK): IN PURSUIT OF SUSTAINABILITY IN FOREST GOVERNANCE

DOI: 10.15742/ilrev.v9n1.539

Study design: Doctrinal/legal

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: This paper investigates the Indonesian Timber Legality Assurance (Sistem Verifikasi Legalitas Kayu, SVLK) and its nature to produce legal wood under the European Union-Forest Law Enforcement Governance and Trade (EU-FLEGT) system. It is intended to ensure the exporting states control over legality of wood under new for

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Primary legal sources clearly identified?	Yes	Constitution/statutes/regulations or legal instruments are central to analysis.	Assessment constrained by available metadata/abstract evidence
Q2. Legal reasoning transparent and internally coherent?	Yes	The argument proceeds from identified legal norms to interpretation/conclusion.	Assessment constrained by available metadata/abstract evidence
Q3. Comparative/secondary authorities used appropriately?	Yes	Secondary scholarship and comparative material are used to contextualize the legal argument.	Assessment constrained by available metadata/abstract evidence
Q4. Empirical causal claims supported?	Can't Tell	Doctrinal research is not designed to establish causal effects statistically.	Assessment constrained by available metadata/abstract evidence
Q5. Conclusions appropriately bounded by legal method?	Yes	Claims are primarily normative, interpretive or institutional.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** FOREST / TRACE

Study 18: Astana S.; Riva W.F.; Hardiyanto G.; Komarudin H.; Sukanda A. (2020)

Towards Improved Forestry Performance: Evaluating the Added Value of the Timber Legality Assurance System in Indonesia

DOI: 10.1505/146554820828671517

Study design: Policy/institutional analysis

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: Indonesia is a main tropical timber-producing country and is a leader in implementing Forest Law Enforcement, Governance and Trade Voluntary Partnership Agreements (FLEGT-VPA) with the European Union (EU). In 2015, as a part of the FLEGT-VPA process, the government began a timber legality assurance system called Sistem

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** FOREST / TRACE

Study 19: Saputra M.A.B.; Mahardika E.R.; Kariim S.A. (2023)

Political direction of environmental management law in indonesia

DOI: 10.15294/ijel.v2i1.66100

Study design: Quantitative/empirical

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: This paper examines the political trajectory shaping environmental management law in Indonesia. With its rich biodiversity and rapid industrialization, Indonesia faces complex challenges in balancing economic development with environmental conservation. The analysis begins with an overview of the historical context, tr

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Source-level verification available
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Source-level verification available
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Source-level verification available
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Source-level verification available
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Source-level verification available

Final rating: High | Theme code: GOV / SDG

Study 20: Boyle J. (1998)

Cultural influences on implementing environmental impact assessment: Insights from Thailand, Indonesia, and Malaysia

DOI: 10.1016/S0195-9255(97)00082-6

Study design: Policy/institutional analysis

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: In Thailand, Indonesia, and Malaysia, political and business support for environmental impact assessment (EIA) is low, and environmental agencies are virtually powerless compared with economic development agencies. Western-style democratic principles are weakly supported, the public is effectively excluded from project

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** GOV / SDG

Study 21: Setyawan D. (2014)

Formulating revolving fund scheme to support energy efficiency projects in Indonesia

DOI: 10.1016/j.egypro.2014.01.194

Study design: Policy/financial analysis

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Taxation and customs facilities had not fully stimulated energy-efficiency investment; a revolving fund mechanism was proposed.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Source-level verification available
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Source-level verification available
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Source-level verification available
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Source-level verification available
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Source-level verification available

Final rating: High | **Theme code:** MARINE / CE

Study 22: Sugiarto A.; Puspani N.N.; Fathia F. (2023)
ESG Leverage towards Stock Performance in Indonesia Stock Exchange

DOI: 10.32479/ijeeep.14384

Study design: Quantitative/empirical

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: Increased numbers of policy tools related to sustainable finance has encourage investors to consider the factor of environmental, social, and governance (ESG) in their investment decisions, which has also become one of the main drivers of the recent surge of assets under management of global and Indonesian ESGs. This s

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Assessment constrained by available metadata/abstract evidence
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Assessment constrained by available metadata/abstract evidence
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Assessment constrained by available metadata/abstract evidence
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Assessment constrained by available metadata/abstract evidence
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** FISC / FIN

Study 23: Wahyuni I.; Harris R.F.; Sujatmoko E. (2023)

The Road to Net-Zero Emission in Indonesia: Legal Loopholes in National Carbon Tax Scheme

DOI: 10.20473/mi.v6i3.48537

Study design: Conceptual/framework

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: Indonesia is committed to accelerating the achievement of Net-Zero Emissions by 2060. The Carbon tax is a new instrument that it believes could encourage the achievement of carbon neutrality. Through the Harmonisation of Tax Regulations Act, the Government regulated several carbon tax provisions, which were initially g

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Core constructs explicitly defined?	Yes	The framework names and relates the principal constructs.	Assessment constrained by available metadata/abstract evidence
Q2. Logical relationships among constructs explained?	Yes	The conceptual relationships are explicitly developed.	Assessment constrained by available metadata/abstract evidence
Q3. Framework grounded in prior literature?	Yes	Framework draws on relevant customs/governance/sustainability literature.	Assessment constrained by available metadata/abstract evidence
Q4. Empirical validation demonstrated?	Can't Tell	Conceptual work is primarily framework-building rather than empirical validation.	Assessment constrained by available metadata/abstract evidence
Q5. Framework useful for the present RQs?	Yes	Directly informs the Green Customs capability model.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: FISC / FIN

Study 24: Brata A.F.Y.; Sedera R.M.H. (2023)

The Implementing a Carbon Tax as a Means of Increasing Investment Value in Indonesia

DOI: 10.53955/jsderi.v1i2.6

Study design: Doctrinal legal research

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Examines carbon-tax effects on environmental change, revenue and renewable-energy investment.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Primary legal sources clearly identified?	Yes	Constitution/statutes/regulations or legal instruments are central to analysis.	Source-level verification available
Q2. Legal reasoning transparent and internally coherent?	Yes	The argument proceeds from identified legal norms to interpretation/conclusion.	Source-level verification available
Q3. Comparative/secondary authorities used appropriately?	Yes	Secondary scholarship and comparative material are used to contextualize the legal argument.	Source-level verification available
Q4. Empirical causal claims supported?	Can't Tell	Doctrinal research is not designed to establish causal effects statistically.	Source-level verification available
Q5. Conclusions appropriately bounded by legal method?	Yes	Claims are primarily normative, interpretive or institutional.	Source-level verification available

Final rating: High | Theme code: FISC / FIN

Study 25: Herianti E.; Marundha A.; Tanjung J.; Atmaja Z.S.; Basuki F.N. (2026)

Mapping green tax impact on environmental social and governance performance of publicly listed companies in Indonesia

DOI: 10.1007/s43621-026-02958-8

Study design: Panel data and mediation analysis

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Green taxation did not show significant direct or indirect effects on ESG performance in the tested sample.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Source-level verification available
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Source-level verification available
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Source-level verification available
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Source-level verification available
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Source-level verification available

Final rating: High | Theme code: FISC / FIN

Study 26: Herianti E.; Marundha A.; Tanjung J.; Atmaja Z.S.; Basuki F.N. (2026)
Green Taxation and ESG Performance: Evidence from Indonesia's Energy, Transportation, and Manufacturing Sectors

DOI: 10.17549/gbfr.2026.31.7.92

Study design: Quantitative/empirical

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: Purpose: This study aims to examine the effect of green taxation on environmental, social, and governance (ESG) performance among Indonesian public companies. It seeks to understand how fiscal environmental policies, particularly green taxes, encourage firms to internalize sustainability values and strengthen their gov

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Assessment constrained by available metadata/abstract evidence
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Assessment constrained by available metadata/abstract evidence
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Assessment constrained by available metadata/abstract evidence
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Assessment constrained by available metadata/abstract evidence
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** FISC / FIN

Study 27: Putri R.W.; Tristiyanto; Putri Y.M.; Davey O.; Sabatira F. (2023)
GREEN BONDS IN INDONESIA: SYNERGY BETWEEN BANK INDONESIA AND OTORITAS JASA KEUANGAN

DOI: 10.21098/jcli.v2i2.37

Study design: Conceptual/framework

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Green bonds promoted by the World Bank have supported developing countries in to mitigate climate change. Indonesia is one county that has issued green bonds through Bank Indonesia and Otoritas Jasa Keuangan (the Indonesian financial services authority or OJK). The synergy between these institutions in issuing green bo

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Core constructs explicitly defined?	Yes	The framework names and relates the principal constructs.	Source-level verification available
Q2. Logical relationships among constructs explained?	Yes	The conceptual relationships are explicitly developed.	Source-level verification available
Q3. Framework grounded in prior literature?	Yes	Framework draws on relevant customs/governance/sustainability literature.	Source-level verification available
Q4. Empirical validation demonstrated?	Can't Tell	Conceptual work is primarily framework-building rather than empirical validation.	Source-level verification available
Q5. Framework useful for the present RQs?	Yes	Directly informs the Green Customs capability model.	Source-level verification available

Final rating: High | **Theme code:** FISC / FIN

Study 28: Berradia H.M. (2026)

The Role of Environmental Disclosure and Green Accounting in Achieving a Sustainable and Investment-Attractive Economy According to Saudi Vision 2030

DOI: 10.3390/su18020987

Study design: Quantitative/empirical

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: This study investigates the different mechanisms through which environmental disclosure and green accounting practices influence investment attractiveness in an emerging market context. Drawing on legitimacy theory and the resource-based view, we examine whether these environmental accountability mechanisms create valu

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Assessment constrained by available metadata/abstract evidence
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Assessment constrained by available metadata/abstract evidence
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Assessment constrained by available metadata/abstract evidence
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Assessment constrained by available metadata/abstract evidence
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: GOV / SDG

Study 29: Ladewi Y.; Meiryani; Suganda Y.M. (2024)

Interrelationships Between Carbon Tax, Carbon Trading, and Low-Carbon Technologies in Indonesia's Journey towards A Low-Carbon Economy

DOI: 10.33168/JLISS.2024.1027

Study design: Conceptual/framework

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: This study reviews the implementation of carbon tax, carbon trading, and low-carbon technologies in Indonesia's transition towards a low-carbon economy. Indonesia has set ambitious targets for reducing greenhouse gas emissions and achieving net-zero emissions by 2060. However, the country faces various challenges in im

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Core constructs explicitly defined?	Yes	The framework names and relates the principal constructs.	Assessment constrained by available metadata/abstract evidence
Q2. Logical relationships among constructs explained?	Yes	The conceptual relationships are explicitly developed.	Assessment constrained by available metadata/abstract evidence
Q3. Framework grounded in prior literature?	Yes	Framework draws on relevant customs/governance/sustainability literature.	Assessment constrained by available metadata/abstract evidence
Q4. Empirical validation demonstrated?	Can't Tell	Conceptual work is primarily framework-building rather than empirical validation.	Assessment constrained by available metadata/abstract evidence
Q5. Framework useful for the present RQs?	Yes	Directly informs the Green Customs capability model.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: FISC / FIN

Study 30: Erdogdu E. (2025)

The Carbon Border Adjustment Mechanism: Opportunities and Challenges for Non-EU Countries

DOI: 10.1002/wene.70000

Study design: Policy/institutional analysis

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: The European Union's Carbon Border Adjustment Mechanism (CBAM) represents a groundbreaking policy to address global climate change by mitigating carbon leakage and aligning international trade with environmental objectives. As the first initiative of its kind, CBAM imposes carbon pricing on imported goods, encouraging

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: GC / COORD

Study 31: Sagone S.; Cellura M. (2025)

The Carbon Border Adjustment Mechanism from developing countries' perspective: a systematic literature review on challenges and opportunities for the Mediterranean basin

DOI: 10.1016/j.esr.2025.101884

Study design: Review

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: The European Carbon Border Adjustment Mechanism (CBAM) aims to prevent carbon leakage by aligning the carbon costs of imported goods with those imposed under the EU Emissions Trading System (ETS), thereby ensuring equitable carbon pricing between imported and domestic products. Through this mechanism, the EU also seeks

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Review question and scope clearly defined?	Yes	Review topic and scope are explicitly defined.	Assessment constrained by available metadata/abstract evidence
Q2. Search strategy described sufficiently?	Yes	Search/database strategy is reported for the review studies where accessible.	Assessment constrained by available metadata/abstract evidence
Q3. Study selection/data extraction systematic?	Yes	Systematic or structured review processes are described.	Assessment constrained by available metadata/abstract evidence
Q4. Risk of bias/quality assessment reported?	Can't Tell	Not consistently recoverable for all review records in the supplied package.	Assessment constrained by available metadata/abstract evidence
Q5. Synthesis appropriate to evidence heterogeneity?	Yes	Narrative/thematic or systematic synthesis is more appropriate than unsupported pooling.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: GC / COORD

Study 32: Liu H.; Mao X.; Gui J.; Wang P. (2025)

The regionalization of international trade in low-carbon technology products and its impact on carbon emission reduction; [低碳技术产品国际贸易的区域化特征及其对碳减排的影响]

DOI: 10.11821/dlyj020240259

Study design: Quantitative/empirical

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: The regionalization of international trade in low-carbon technology products essentially creates a new border for the dissemination of low-carbon technologies, and leads to the uncertainty in each country's efforts to reduce carbon emissions. Regionalization results either from differences in terms of trade (the cluste

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Assessment constrained by available metadata/abstract evidence
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Assessment constrained by available metadata/abstract evidence
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Assessment constrained by available metadata/abstract evidence
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Assessment constrained by available metadata/abstract evidence
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: FISC / FIN

Study 33: Mahmud K.K.; Chowdhury M.M.H.; Shaheen M.M.A. (2024)

Green port management practices for sustainable port operations: a multi method study of Asian ports

DOI: 10.1080/03088839.2023.2258125

Study design: Multi-method empirical study

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Green-port management requires integrated governance and operational sustainability practices.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clear research question and appropriate mixed-method rationale?	Yes	Research question/mixed design is stated or inferable and the design is aligned.	Source-level verification available
Q2. Adequate qualitative component?	Yes	Qualitative evidence is used to identify contextual/organizational mechanisms.	Source-level verification available
Q3. Adequate quantitative component?	Yes	Quantitative evidence is used to test relationships or barriers.	Source-level verification available
Q4. Integration of qualitative and quantitative components?	Yes	The design explicitly combines qualitative and quantitative evidence.	Source-level verification available
Q5. Conclusions supported by the integrated evidence?	Yes	Main conclusions are consistent with the reported design and results.	Source-level verification available

Final rating: High | **Theme code:** MARINE / CE

Study 34: Pambudi J.A.A.; Dayana I.; Alfirman D.M.; Susanto D.; Widianingrum R. (2023)

Accelerating Indonesia Sustainable Infrastructure Development through ESG Initiatives in PPP Ecosystem

DOI: 10.1088/1755-1315/1266/1/012020

Study design: Qualitative case study

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: The Government of Indonesia committed to implement the Sustainable Development Goals (SDGs) aim to end poverty, inequality, and mitigate climate change. The submission of an Enhanced Nationally Defined Contribution (ENDC) to UNFCCC strengthens Indonesia's commitment in a low-carbon and climate-resilient economy developm

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | Theme code: FISC / FIN

Study 35: Fernando Y.; Wahyuni-T.D I.S.; Gui A.; Ikhsan R.B.; Mergeresa F.; Ganesan Y. (2023)

A mixed-method study on the barriers of industry 4.0 adoption in the Indonesian SMEs manufacturing supply chains

DOI: 10.1108/JSTPM-10-2021-0155

Study design: Mixed methods

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Purpose: This paper aims to investigate the adoption barriers of Industry 4.0 in the Indonesian manufacturing supply chains. Design/methodology/approach: The mixed method was deployed to validate the findings. First, the qualitative study was conducted based on the interviews. Then, the companies were approached using

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clear research question and appropriate mixed-method rationale?	Yes	Research question/mixed design is stated or inferable and the design is aligned.	Source-level verification available
Q2. Adequate qualitative component?	Yes	Qualitative evidence is used to identify contextual/organizational mechanisms.	Source-level verification available
Q3. Adequate quantitative component?	Yes	Quantitative evidence is used to test relationships or barriers.	Source-level verification available
Q4. Integration of qualitative and quantitative components?	Yes	The design explicitly combines qualitative and quantitative evidence.	Source-level verification available
Q5. Conclusions supported by the integrated evidence?	Yes	Main conclusions are consistent with the reported design and results.	Source-level verification available

Final rating: High | **Theme code:** DIG / AI

Study 36: Paryanto P.; Indrawan H.; Cahyo N.; Simaremare A.; Aisyah S. (2020)

Challenges toward industry 4.0: A case study of power plants in Indonesia

DOI: 10.1109/ICT-PEP50916.2020.9249918

Study design: Quantitative/empirical

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: This paper presents challenges for implementing industry 4.0 in power plants in Indonesia. The challenges are identified based on the industry 4.0 readiness assessment that was conducted at several power plants in Indonesia during 2019/2020. The interview and site visit survey were used in the assessment. By identifying

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Assessment constrained by available metadata/abstract evidence
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Assessment constrained by available metadata/abstract evidence
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Assessment constrained by available metadata/abstract evidence
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Assessment constrained by available metadata/abstract evidence
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** DIG / AI

Study 37: Siror J.K.; Sheng H.; Dong W. (2010)

Automating customs verification process using RFID technology

Study design: Policy/institutional analysis

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: Customs administrations are beginning to embrace intelligent technologies so as to address the challenge of security, speed and efficiency in trade facilitation. Use of the supply chain by crooks and terrorists has led to employment of intelligent risk management techniques for identification and subsequent verificatio

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Problem and policy context clearly defined?	Yes	Policy/institutional problem is explicit.	Assessment constrained by available metadata/abstract evidence
Q2. Evidence base appropriate to the problem?	Yes	Uses legal, institutional or policy evidence relevant to the question.	Assessment constrained by available metadata/abstract evidence
Q3. Methods/analytical approach transparent?	Yes	The study states an analytical or policy approach.	Assessment constrained by available metadata/abstract evidence
Q4. Alternative explanations/limitations addressed?	Can't Tell	Full-text access is incomplete for some records.	Assessment constrained by available metadata/abstract evidence
Q5. Recommendations follow from evidence?	Yes	Recommendations are substantively connected to the identified problem.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** GC / COORD

Study 38: Datta D.; Self N.; Simeone J.; Meadows A.; Outhwaite W.; Walker L.; Elmqvist N.; Ramakrishnan N. (2023)

TimberSleuth: Visual anomaly detection with human feedback for mitigating the illegal timber trade

DOI: 10.1177/14738716231157081

Study design: Human-in-the-loop computer vision

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Visual anomaly detection can support identification of potentially illegal timber transactions.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Source-level verification available
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Source-level verification available
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Source-level verification available
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Source-level verification available
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Source-level verification available

Final rating: High | Theme code: FOREST / TRACE

Study 39: Datta D.; Simeone J.C.; Meadows A.; Outhwaite W.; Keong Chen H.; Self N.; Walker L.; Ramakrishnan N. (2025)

Combating trade in illegal wood and forest products with machine learning

DOI: 10.1371/journal.pone.0311982

Study design: Machine-learning empirical study

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: ML can strengthen identification and monitoring of illegal wood and forest-product trade.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Source-level verification available
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Source-level verification available
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Source-level verification available
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Source-level verification available
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Source-level verification available

Final rating: High | Theme code: FOREST / TRACE

Study 40: Jia H.; Lin B. (2025)

Does public satisfaction with government environmental performance promote their participation in environmental protection?

DOI: 10.1016/j.seps.2025.102161

Study design: Ordered-logit/logit empirical analysis

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Government environmental performance and trust are associated with greater environmental participation.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clearly defined sample/participants?	Yes	Study population/sample is identified in the Scopus metadata or accessible report.	Source-level verification available
Q2. Exposure/intervention and outcomes measured validly?	Yes	Core constructs are operationalized through stated variables or analytical measures.	Source-level verification available
Q3. Appropriate statistical analysis?	Yes	Reported analysis is aligned with the research question (e.g., panel, regression, logit, ML).	Source-level verification available
Q4. Confounding/bias addressed?	Can't Tell	Available metadata do not permit full assessment of all confounding controls.	Source-level verification available
Q5. Results support conclusions?	Yes	The reported findings are consistent with the stated analytical design.	Source-level verification available

Final rating: High | Theme code: GOV / SDG

Study 41: Karuniasa M.; Firdaus T. (2025)
Points of Entry for Enhancing Policymakers' Capacity to Develop Green Economy Agenda-Setting

DOI: 10.3390/su172310727

Study design: Mixed methods

Verification status: Scopus metadata + abstract/publisher record; full-text access not established in this run

Primary finding used in synthesis: Indonesia has articulated ambitious green economy objectives through frameworks such as the Low Carbon Development Initiative (LCDI). Despite this ambition, a critical research gap exists. The weak 'green political capabilities' of policymakers—defined as their ability to navigate political processes, build coalitions,

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Clear research question and appropriate mixed-method rationale?	Yes	Research question/mixed design is stated or inferable and the design is aligned.	Assessment constrained by available metadata/abstract evidence
Q2. Adequate qualitative component?	Yes	Qualitative evidence is used to identify contextual/organizational mechanisms.	Assessment constrained by available metadata/abstract evidence
Q3. Adequate quantitative component?	Yes	Quantitative evidence is used to test relationships or barriers.	Assessment constrained by available metadata/abstract evidence
Q4. Integration of qualitative and quantitative components?	Yes	The design explicitly combines qualitative and quantitative evidence.	Assessment constrained by available metadata/abstract evidence
Q5. Conclusions supported by the integrated evidence?	Yes	Main conclusions are consistent with the reported design and results.	Assessment constrained by available metadata/abstract evidence

Final rating: High | **Theme code:** GOV / SDG

Study 42: Trenggono S.W.; Meilano I.; Latief H.; Simamora D.C.; Sabina A.; Arthatiani F.Y.; Radiarta I.N. (2025)

Developing a marine and fisheries blue economy index for Indonesia: A comprehensive assessment framework

DOI: 10.1016/j.sfr.2025.101440

Study design: Quantitative index/PCA

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Indonesia, as the world's largest archipelagic nation, possesses vast marine resources vital to its economic and ecological sustainability. To promote sustainable marine development aligned with Blue Economy principles, this study introduces the Marine and Fisheries Blue Economy Index (MFBEI). The index evaluates Indon

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Constructs and indicators clearly defined?	Yes	Index dimensions and indicators are specified.	Source-level verification available
Q2. Data sources appropriate and transparent?	Yes	The study describes multidimensional data inputs.	Source-level verification available
Q3. Index construction method appropriate?	Yes	PCA/index methodology is appropriate for dimensional reduction/aggregation.	Source-level verification available
Q4. Robustness/sensitivity adequately assessed?	Can't Tell	Full methodological diagnostics are not fully recoverable from metadata alone.	Source-level verification available
Q5. Conclusions follow from index evidence?	Yes	Interpretation remains within the scope of the constructed index.	Source-level verification available

Final rating: High | Theme code: MARINE / CE

Study 43: Sari W.R.; Darojat A.J.S. (2026)
Ship Recycling in Indonesia: Analysis of Compliance with National Regulations and International Standards

DOI: 10.7225/toms.v15.n01.018

Study design: Systematic/bibliometric and qualitative compliance analysis

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Reveals regulatory fragmentation and implementation gaps in ship recycling.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Review question and scope clearly defined?	Yes	Review topic and scope are explicitly defined.	Source-level verification available
Q2. Search strategy described sufficiently?	Yes	Search/database strategy is reported for the review studies where accessible.	Source-level verification available
Q3. Study selection/data extraction systematic?	Yes	Systematic or structured review processes are described.	Source-level verification available
Q4. Risk of bias/quality assessment reported?	Can't Tell	Not consistently recoverable for all review records in the supplied package.	Source-level verification available
Q5. Synthesis appropriate to evidence heterogeneity?	Yes	Narrative/thematic or systematic synthesis is more appropriate than unsupported pooling.	Source-level verification available

Final rating: High | **Theme code:** MARINE / CE

Study 44: Lawasi Moh.A.; Kenda N.; Yusnikusumah T.R.; Pratama B.B.; Pratiwi D.; Septina A.D.; Asrawijaya E. (2025)

FOREST-BASED ECOTOURISM IN INDONESIA: A COMPREHENSIVE REVIEW OF POLICY CHALLENGES, DIVERSE PRACTICES, STAKEHOLDER ENGAGEMENT, CONSERVATION EFFORTS, AND SOCIOECONOMIC ASPECTS

DOI: 10.30892/gtg.602spl02-1478

Study design: Comprehensive literature review

Verification status: Full text / publisher-accessible source reviewed

Primary finding used in synthesis: Sustainability requires governance, conservation, stakeholder engagement and socioeconomic integration.

Formal appraisal

Question	Decision	Reason	Evidence note
Q1. Review question and scope clearly defined?	Yes	Review topic and scope are explicitly defined.	Source-level verification available
Q2. Search strategy described sufficiently?	Yes	Search/database strategy is reported for the review studies where accessible.	Source-level verification available
Q3. Study selection/data extraction systematic?	Yes	Systematic or structured review processes are described.	Source-level verification available
Q4. Risk of bias/quality assessment reported?	Can't Tell	Not consistently recoverable for all review records in the supplied package.	Source-level verification available
Q5. Synthesis appropriate to evidence heterogeneity?	Yes	Narrative/thematic or systematic synthesis is more appropriate than unsupported pooling.	Source-level verification available

Final rating: High | Theme code: FOREST / TRACE

Supplementary Table S2. PRISMA 2020 flow counts

Stage	n	Source/basis
Records identified from Scopus export 1	75	Supplied Scopus CSV
Records identified from Scopus export 2	70	Supplied Scopus CSV
Total rows before deduplication	145	Two exports combined
Duplicate records removed	5	EID-level overlap across exports
Unique records screened	140	Scopus EID deduplication
Records excluded after relevance screening	94	Study-level analytical screening
Records retained for eligibility	46	Final analytical corpus
Studies included in qualitative synthesis	46	Final corpus
Studies included in meta-analysis	0	Heterogeneous evidence base

PRISMA caveat. The 94 exclusions are the result of the analytical relevance-screening stage used for this manuscript. They are not a database-generated exclusion code. The two Scopus exports establish the 145-row retrieval universe and 140 unique EIDs; the 46-study inclusion set is the reviewed analytical corpus. A final submission should retain the screening log used to produce the 94 exclusions as a reproducibility supplement.

Supplementary Table S3. Appraisal question sets by design

Instrument/family	Five core appraisal questions
MMAT 2018	Clear research question and mixed-method rationale; Adequate qualitative component; Adequate quantitative component; Integration of qualitative and quantitative evidence; Conclusions supported by integrated evidence
JBI analytical/observational	Clearly defined sample/participants; Valid measurement of exposure and outcomes; Appropriate statistical analysis; Confounding/bias addressed; Results support conclusions
AMSTAR 2 principles	Review question/scope clearly defined; Search strategy adequately described; Study selection/data extraction systematic; Risk of bias/quality assessment reported; Synthesis appropriate to evidence
Doctrinal legal appraisal	Primary legal sources identified; Legal reasoning transparent; Secondary/comparative authorities used appropriately; Empirical causal claims appropriately bounded; Conclusions fit legal method
Conceptual/framework appraisal	Core constructs defined; Relationships among constructs explained; Grounded in prior literature; Empirical validation identified; Utility for review questions
Policy/institutional appraisal	Problem/context defined; Evidence appropriate; Analytical approach transparent; Limitations/alternatives addressed; Recommendations follow evidence

Study 46: Dutt S.; Purwanto P.; Sudarno S. (2025)

Synergizing Circular Economy and Eco-Industrial Park Concepts: A Literature-Based Exploration for Advancing Inclusive and Sustainable Industrial Development in Indonesia

DOI: 10.1051/e3sconf/202565002013

Design: Literature-based/conceptual review

Verification: Scopus metadata and publisher record; complete full text was not independently accessed in this run.

Finding used in synthesis: The study links circular economy and eco-industrial-park concepts with inclusive and sustainable industrial development in Indonesia, supporting the broader Green Customs argument that resource circularity requires integrated policy and industrial governance.

Formal appraisal

Question	Decision	Reason	Evidence basis
Q1	Core constructs defined?	Yes	Circular economy and eco-industrial park concepts are explicit.
Q2	Relationships among constructs explained?	Yes	The review connects circularity with industrial sustainability.
Q3	Grounded in prior literature?	Yes	A literature-based approach is used.
Q4	Empirically validated framework?	Can't Tell	The record is principally literature-based rather than causal empirical validation.
Q5	Useful for Green Customs RQs?	Yes	It supports the circularity/resource-efficiency mechanism relevant to border governance.

Final rating: Moderate