

Ecomedia Research Landscape: A Scoping Review of Theoretical Frameworks, Methodological Trends, and Future Directions

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Abstract: Ecomedia has evolved into an interdisciplinary field bridging media studies, environmental humanities, and ecological criticism. However, systematic syntheses of its theoretical frameworks and methodological trends remain limited. This study aims to map the conceptual, geographic, and methodological countour of ecomedia research and to identify emerging direction for the field. Using the PRISMA-Scr framework, we conducted a scoping review of 21 Scopus index articles published between 2008 and 2026, combining bibliometrix analysis with thematic to examine publication patterns, theoretical framework, and methodological approaches. The results show a significant acceleration in publication after 2020, with 76.2 percent of articles appearing between 2020 and 2026 and disciplinary clustering around Ekphrasis (4 articles), Environmental Communication (2 articles), and other environmental-humanities outlets. Thematic mapping identifies eight major theoretical frameworks evolving in parallel, ranging from intermedial ecocriticism, ecomedia literacy, and trans-corporeality to more recent concepts such as dark ecomedia, the environmental uncanny, and the media maintenance approach (MEMA). Methodologically, the field is dominated by qualitative close reading and case-study designs, while quantitative experiments remaining rare. The findings further reveal a geographic shift from Euro-American academic centres toward the Global South, particularly Africa, Latin America, and South Asia, signals a wave of epistemological decolonisation. These patterns indicate that ecomedia is consolidating theoretically while remaining methodolically narrow and unevenly distributed across regions. The review concludes by proposing five future research directions: strengthening media-materiality studies, developing evidence-based ecomedia literacy, exploring dark ecomedia, integrating decolonial approaches, and elaborating mixed-methods designs.

Keywords: Ecomedia; Ecological Criticism; Environmental Humanities; Scoping Review.

Introduction

The global climate crisis, accelerating biodiversity loss, and deepening socio-ecological disconnection have repositioned media as a central actor in the contemporary negotiation of environmental meaning. Media are no longer regarded merely as channels for

representing nature; they are increasingly understood as material infrastructures that actively shape, and sometimes exacerbate, ecological crises (Cubitt, 2014b; Caraway, 2018, Mellyzar et al., 2024). This understanding draws on a broader materialist turn in media theory that traces the dependence of media systems on mineral extraction, energy consumption, and

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electronic waste (Marks et al., 2020; Parikka, 2015), as well as on the often-invisible physical infrastructures that sustain global media circulation (Hogan, 2023). This dual awareness gave rise to ecomedia as an interdisciplinary field of inquiry, a domain that interrogates how the representation, materiality, and consumption of media interrelate with planetary ecological dynamics, locating it firmly within the broader project of the environmental humanities (Heise et al., 2017).

Since Van Vuuren and Lester (2008) first identified the surge of public interest in environmental issues in the mid-2000s, marked by phenomena such as *An Inconvenient Truth* and IPCC reports, ecomedia scholarship has shifted from genre criticism of nature-themed films toward broader analyses of the material circulation of media technologies (Cubitt, 2014a). This reorientation reflects a deeper epistemological transformation as Oppermann (2021) observes, ecomedia studies insists that media are not merely text, image, and sound transmitted through machines, but the very social and material relationships that make transmission possible, thereby distinguishing the field from the older discipline of media studies and its metaphorical nation of media ecologies, inherited from McLuhan (1964) and Postman (1970), for whom “ecology” functioned primarily as a metaphor for the symbolic environments produced by communication technologies rather than as a claim about their physical entanglement with the biosphere.

Within this expanding terrain, several scholars sought to explain the persistent disjuncture between the proliferation of environmental messaging and stagnation of ecological behaviour. This disjuncture echoes a long-standing concern in environmental communication and education research, where studies of the value-action gap document how environmental knowledge and concern frequently fail to translate into pro-environmental behaviour (Portus et al., 2024). Estok (2016) introduced the concept of ecophobia to explain a central paradox: although media are saturated with environmental messages, public ecological behaviour often stagnates or deteriorates. Concurrently, Caraway (2018) proposed a literal media ecology, adopting a Marxian framework to expose the contradiction between corporate sustainability claims and the inherently environmentally destructive logic of capital accumulation. These interventions shared a common refusal to treat environmental media as self evidently beneficial, instead foregrounding the ideological, affective, and economic structures that mediate and frequently undermine the translation of ecological awareness into action, thereby registering the material and affective.

The conceptual diversification of ecomedia has since proceeded rapidly. Bruhn (2020) introduced intermedial ecocriticism, integrating intermedial studies with ecological criticism. Lopez (2023) developed ecomedia literacy as a critical pedagogy organised around four zones of inquiry: ecoculture, political ecology, ecomateriality, and lifeworld. More recently, Onnerfors and Mars (2025) proposed dark ecomedia as an antithesis to dominant activist-ecological approaches, tracing how cultural expression can function as an instrument for delaying climate action. Most recently, Ferrigato and Balbi (2026) formulated the media maintenance approach (MEMA) as an integrative framework for unifying sub-fields that have developed in relative isolation.

The term ecomedia encompasses a broad constellation of research practices that examine the relationships between media and ecology (Antonio López et al., 2024; Oppermann, 2021; Tola, 2026). Van Vuuren and Lester (2008) first called for ecology to be recognised as a category of media research equivalent in standing to class, race, and gender, thus establishing a foundational claim for the field. Cubitt (2014a) subsequently defined ecomedia futures as a political-economic framework concerned with the material conditions of media production and their ecological consequences. Caraway (2018) radicalised this orientation by proposing a literal media ecology grounded in Marxian political economy.

More recent scholarship has broadened ecomedia to encompass pedagogical, affective, and decolonial dimensions. Lopez (2023) situates ecomedia literacy within critical media education, while Onnerfors and Mars (2025) extend the field to examine cultural expressions that actively resist or undermine environmental action. Ferrigato and Balbi (2026) propose ecomedia as one strand within a broader media maintenance approach that integrates maintenance, repair, and sustainability concerns across media studies. As this review demonstrates, these definitions are neither uniform nor mutually exclusive; their diversity is itself a key characteristic of ecomedia as a research field.

Despite the richness of this conceptual landscape, systematic syntheses that map the full terrain of ecomedia research remain scarce. Most existing literature reviews are thematic in focus, covering specific genres, geographic regions, or single theoretical approaches, without providing a holistic account of the field's evolution, distribution, and epistemological gaps. Given the rapid growth in publications after 2020 and the emergence of new theoretical frameworks, the need for a structured research map has become increasingly pressing.

This article seeks to address this gap by conducting a scoping review of Scopus-indexed ecomedia literature. Unlike systematic reviews, which are designed to synthesis evidence for narrow clinical questions, scoping reviews are intended to map the breadth, depth, and characteristics of a relatively new or fragmented research field by identifying key concepts, sources of evidence, and knowledge gaps (Arksey & O'Malley, 2005; Tricco et al., 2018; Mellyzar et al., 2025). This approach is well-suited to ecomedia given its theoretical and methodological heterogeneity. Three research questions guide this review:

1. What are the bibliometric characteristics and geographic distribution of ecomedia research?
2. Which theoretical frameworks and methodological trends are dominant?
3. What knowledge gaps and future research directions can be identified?

The article is structured in six sections. Following this introduction, Section 2 describes the PRISMA-ScR methodology employed. Section 3 presents bibliometric, geographic, theoretical, and methodological findings. Section 4 discusses five major tensions and trends emerging from the analysis. Section 5 addresses limitations and future research directions. Section 6 presents conclusions and implications for the field.

Method

Research design

This study employs a scoping review design following the framework of Arksey and O'Malley (2005), subsequently extended by Tricco et al. (2018) through the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews) guidelines. Unlike a systematic review designed to answer a narrow and specific research question, a scoping review aims to map the breadth, depth, and characteristics of literature in a relatively new or fragmented field. The five principal stages followed were: (1) identifying the research questions, (2) identifying relevant studies, (3) selecting studies, (4) charting the data, and (5) collating, summarising, and reporting the results.

Search strategy and data sources

The literature search was conducted using the Scopus database, accessed on 29 April 2026. Scopus was selected as the sole source due to its broad coverage of reputable international humanities and social science journals and its consistent indexing system for bibliometric analysis. The search strategy employed the single keyword 'ecomedia', searched across title, abstract, and keywords fields. This deliberate choice of a single keyword, rather than a more complex Boolean

search strategy, was intended to capture the corpus of literature that explicitly identifies itself as belonging to the field of ecomedia, thereby avoiding contamination with the broader ecocriticism literature that does not specifically address the medial dimension.

Inclusion and exclusion criteria

Inclusion criteria comprised: (a) articles published in peer-reviewed academic journals; (b) available in English; (c) possessing accessible abstracts and keywords; and (d) substantively addressing the concept of ecomedia or closely related fields. Exclusion criteria encompassed: (a) conference proceedings not revised as journal articles, (b) book chapters and short editorials of fewer than five pages, and (c) articles that mentioned ecomedia only tangentially without conceptual or empirical elaboration. Following the screening process, 21 articles met the inclusion criteria and were included in the final analysis.

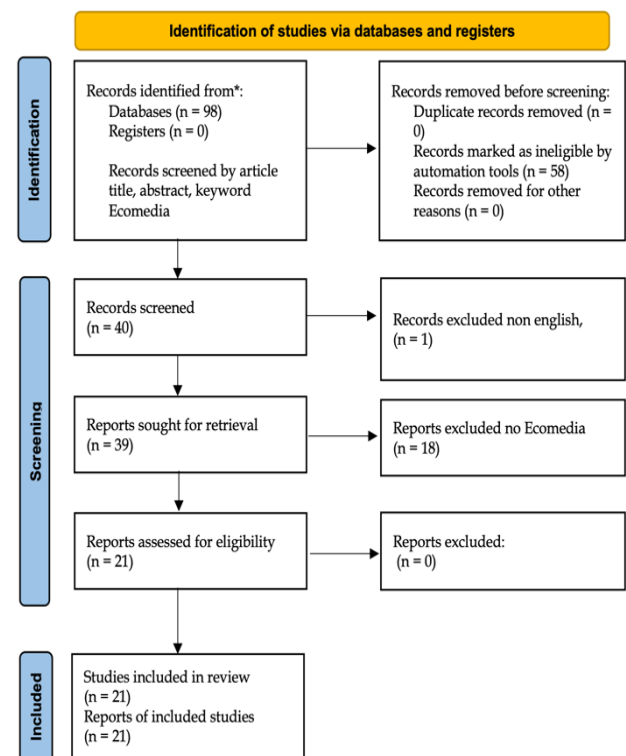


Figure 1. PRISMA flow diagram of the study selection process

Data extraction and analysis

Data extraction was conducted using a structured form that captured: (a) bibliographic data (authors, year, title, journal, citation count), (b) institutional and national affiliation of lead authors, (c) research objectives, (d) principal theoretical frameworks, (e) methodology employed, (f) objects or case studies, (g) key findings, and (h) contribution to the field. Analysis proceeded in two stages. The first comprised descriptive

bibliometric analysis to map annual, geographic, and journal distributions. The second involved inductive thematic analysis to identify patterns in theoretical frameworks and methodological trends. To enhance the robustness of the analysis, cross-verification was conducted between initial categories emerging from abstract reading and those emerging from full-text reading

Result and Discussion

Table 1 presents the general characteristics of the 21 included studies. Four studies originate from the United States; three from Sweden; two from Italy; and one each from the United Kingdom, Australia, Israel, Bangladesh, Poland, Brazil, and transnational collaborative teams. The majority were published between 2020 and 2026. Of the 21 articles, 18 employed qualitative designs, two employed mixed methods, and one employed an experimental (randomised controlled) design. The studies span a wide range of media objects, including documentary film, children's animation, digital games, music, and visual art installations.

In the sections that follow (3.1 to 3.6), we summarise the characteristics of the included studies across six analytical dimensions: bibliometric trends, geographic distribution, publication sources, theoretical frameworks, methodological approaches, and thematic objects of study.

Bibliometric characteristics and publication trends

Analysis of the 21 articles reveals a non-linear but significantly accelerating pattern of growth in the latter half of the 2020s. The earliest article in the corpus, Van Vuuren and Lester (2008), functions as a kind of founding manifesto, identifying a gap in Australian media-environment research and calling for ecology to be recognised as a research category equal to class, race, and gender. Following an approximate six-year hiatus, two pivotal articles by Sean Cubitt (2014a, 2014b) marked the field's resurgence, one tracing ecomedia futures as a political-economic framework and the other intervening with a decolonising agenda.

The most pronounced growth occurred after 2020. Sixteen of the 21 articles (76.2 percent) were published between 2020 and 2026, with four articles each in 2025 and 2026. This trajectory suggests that ecomedia is entering a phase of disciplinary maturation, characterised by the emergence of dedicated journals and the continuous production of new conceptual frameworks. This acceleration coincides with the COVID-19 pandemic, the escalating climate crisis, and the momentum of decolonial movements in academia, contextual forces that appear to have stimulated

renewed reflection on media-environment-justice relationships.

Table 1. Distribution of Publications by Year (n = 21)

Year	No. of Articles	Percentage (%)	Key Contribution
2008	1	4.8	Founding period (Van Vuuren & Lester)
2014	2	9.5	Theoretical resurgence (Cubitt x 2)
2016	1	4.8	Ecophobia concept (Estok)
2018	2	9.5	Material ecocriticism (Caraway; Ryan)
2020	3	14.3	Intermedial turn (Bruhn; Weik Von Mossner; Caraway & Caraway)
2021	1	4.8	African ecomedia (Iheka)
2023	1	4.8	Ecomedia literacy (Lopez)
2024	2	9.5	Empirical experiments (Lo Iacono et al.; da Fonseca)
2025	4	19.0	Thematic diversification Conceptual consolidation
2026	4	19.0	

Note. Compiled by the authors from Scopus (accessed 29 April 2026).

Geographic distribution of authors

Mapping the institutional affiliations of lead authors indicates that ecomedia scholarship remains dominated by Euro-American academia, though with a discernible shift toward peripheral regions. Italy produced the highest number of contributions (4 articles), primarily through John Cabot University in Rome, home to Antonio Lopez, Ludovica Lo Iacono, and Miriam Tola. Sweden (3 articles, via Linnaeus University and Malmo University) and the United Kingdom/Scotland (2 articles, via Sean Cubitt) also constitute significant centres of production. Theoretically noteworthy is the emergence of contributions from Bangladesh (Rahmatullah et al., 2026), Poland (Borowski, 2026), and Brazil (da Fonseca, 2024), regions that have been largely absent from mainstream ecomedia discourse.

This pattern confirms Cubitt's (2014a) thesis regarding the necessity of a 'de-Westernising move in ecopolitics.' Although knowledge production remains centred in the global North, the objects of study increasingly shift southward. Iheka (2021) analyses the Niger Delta from Yale, Rahmatullah et al. (2026) examine African eco-documentaries from Bangladesh, and Carey-Webb (2025) investigates Brazilian eco-melodrama from the University of New Mexico. This

configuration implies an emerging form of transnational ecomedia studies in which authors located in traditional academic centres increasingly mediate ecological knowledge from peripheral regions, a dynamic that opens opportunities but also carries risks of reproducing epistemic hierarchies.

Publication sources

Table 2 presents the distribution of articles by journal. The highest concentration is found in Ekphrasis (4 articles), a journal published by Babes-Bolyai University that consistently features contributions to intermedial ecocriticism, including the 2020 special issue edited by Bruhn. Environmental Communication (2 articles) represents the field's reach into environmental communication studies, while the Journal of Environmental Media is emerging as a dedicated venue.

Table 2. Distribution of Publication Sources (n = 21)

Journal	Publisher	No.
Ekphrasis	Babes-Bolyai University	4
Environmental Communication	Routledge (Taylor & Francis)	2
Journal of Environmental Media	Intellect Ltd.	1
Cultural Politics	Duke University Press	1
International Journal of Media and Cultural Politics	Intellect Ltd.	1
Television and New Media	SAGE Publications	1
Media, Culture and Society	SAGE Publications	1
Neohelicon	Springer Netherlands	1
Journal of Environmental Education	Routledge	1
Social Sciences	MDPI	1
Journal for Cultural Research	Routledge	1
Ambiente e Sociedade	UNICAMP	1
Journal of Italian Cinema and Media Studies	Intellect Ltd.	1
African Identities	Routledge	1
Journal of Visual Culture	SAGE Publications	1
Media International Australia	SAGE Publications	1
Year's Work in Critical and Cultural Theory	Oxford University Press	1

Note. Compiled by the authors from Scopus (accessed 29 April 2026).

The diversity of venues is notable: 17 different journals accommodate 21 articles, suggesting that ecomedia remains dispersed across disciplines rather than consolidated within a single dedicated journal. This distribution reflects the field's evolving position at the

intersection of media studies, environmental humanities, cultural studies, and communication, an interdisciplinary character that fosters creativity but also complicates the development of a coherent canon.

Theoretical frameworks

Thematic mapping reveals eight major theoretical frameworks evolving within the corpus, presented in Table 3. These frameworks are not mutually exclusive; many articles integrate two or more perspectives. Nonetheless, their identification is essential for understanding the intellectual architecture of the field.

Table 3. Principal Theoretical Frameworks in the Ecomedia Corpus

Theoretical Framework	Key Concepts	Principal Contributors
Intermedial ecocriticism	Convergence of intermedial studies and ecological criticism across media	Bruhn (2020); Weik Von Mossner (2020); Jonsson (2025)
Material/Marxian ecocriticism	Conditions of production, political economy of media, critique of capitalism	Caraway (2018); Caraway & Caraway (2020); Cubitt (2014a)
Decolonial/postcolonial ecocriticism	Indigenous knowledge, environmental justice, de-Westernisation	Cubitt (2014b); Iheka (2021); Rahmatullah et al. (2026); Lopez (2025)
Ecomedia literacy	Critical pedagogy organised around four zones of inquiry	Lopez (2023); Lo Iacono et al. (2024)
Ecophobia	Ethical contradictions in popular ecological representation	Estok (2016)
Trans-corporeality	Toxic embodiment and ecological reparation	Tola (2026)
Dark ecomedia	Climate denial, conspiratorial affect	Onnerfors & Mars (2025)
Media maintenance approach (MEMA)	Maintenance, repair, continuity and change in media	Ferrigato & Balbi (2026)
Environmental uncanny	Mediation as a multispecies geological process	Borowski (2026)
Disanthropic narratives	Narratives of human extinction and nature's reclamation	Jonsson (2025)

Note. Compiled by the authors based on thematic analysis of the corpus.

Three key observations emerge from this mapping. First, ecocriticism remains the epistemological foundation of the field, understood since Glotfelty and Fromm (1996) as the study of the relationship between

literature, culture, and the physical environment, yet it is increasingly hybridised with other critical frameworks, from ecological Marxism to decolonial theory, yet it is increasingly hybridised with other critical frameworks, from ecological Marxism to decolonial theory. Second, a rapid conceptual diversification has occurred since 2024, with new coinages such as dark ecomedia, environmental uncanny, and MEMA each attempting to capture dimensions previously overlooked. Third, a reflexive tendency is discernible: the field increasingly critiques itself, as in Estok's (2016) questioning of ecophobia within ecomedia, or Onnerfors and Mars's (2025) exposure of the darker facets of media-environmental activism.

Methodological trends

Methodologically, ecomedia research is dominated by qualitative approaches, particularly close reading and textual analysis. Eighteen of the 21 articles (85.7 percent) employ single case studies or multi-case analyses. Several specific trends can be identified. The intermedial approach pioneered by Bruhn (2020) has been adopted by several articles to compare ecological representations across media, from murals and video games (Jonsson, 2025) to music, lyrics, and music videos (Onnerfors & Mars, 2025). Infrastructural and network approaches, such as that employed by Iheka (2021), integrate textual analysis with mapping of the material chains of production, distribution, and consumption.

Table 4. Distribution of Methodological Approaches (n = 21)

Methodological Approach	No. of Articles	Percentage (%)	Status
Close reading / textual analysis	10	47.6	Dominant
Multi-object case study	5	23.8	Frequent
Intermedial analysis	4	19.0	Frequent
Transmedial analysis	1	4.8	Rare
Infrastructural / network approach	1	4.8	Rare
Quantitative experiment (RCT)	1	4.8	Rare
Literature review	2	9.5	Moderate
Visual ethnography / fieldwork	0	0.0	Absent

Note. Some articles employ more than one approach, so total percentage exceeds 100. Compiled by the authors.

A striking contrast is found in the study by Lo Iacono, Lopez, and Visintin (2024), which constitutes the only quantitative experimental study in the corpus. Drawing on a randomised controlled design with 106 participants, this study tested the effectiveness of

ecomedia literacy lessons on pro-environmental attitudes and behavioural intentions. Although findings were mixed, the methodological contribution is considerable, as it demonstrates that ecomedia can be evaluated according to the standards of empirical social science. The dominance of qualitative and conceptual approaches, coupled with the limited presence of quantitative investigations, points to a significant methodological imbalance and represents a key area for future research development.

Themes and objects of study

The corpus displays a broad diversity of objects of study, encompassing documentary film (Carey-Webb, 2025; Rahmatullah et al., 2026; Weik Von Mossner, 2020), children's animated film (Caraway & Caraway, 2020), performance art and installation (Iheka, 2021; Lopez, 2025), video games (Jonsson, 2025), music and music videos (Onnerfors & Mars, 2025; Tola, 2026), photography (Borowski, 2026), and corporate sustainability reports (Caraway, 2018). This spread demonstrates that ecomedia is not confined to the nature documentary genre but extends across the full spectrum of contemporary cultural production.

Five cross-article themes can be identified: (1) representation of climate crisis and extinction, (2) materiality of media technologies and their ecological footprint, (3) colonial extractivism and environmental justice, (4) pedagogy and media-environmental literacy, and (5) negotiation of cultural identity with nature. The theme of colonial extractivism emerges most strongly in articles focused on the Niger Delta (Iheka, 2021), Amazonia (Carey-Webb, 2025), and African eco-documentary (Rahmatullah et al., 2026), suggesting that the decolonial framework has become one of the most productive lenses in contemporary ecomedia.

Discussion

Based on the mapping conducted above, this section elaborates five major tensions and trends that shape the landscape of contemporary ecomedia research. This discussion is intended as critical synthesis rather than mere recapitulation, with the aim of identifying both productive nodes and problematic fault lines in the field's evolution.

From representationalism to materialism: an ontological shift

One of the most fundamental shifts in ecomedia research is the change in focus from ecological representation in media to the materiality of media itself. In the field's early phase, represented by Van Vuuren and Lester (2008), the central question concerned how media discursively constructed nature and environmental issues. By the mid 2010s, Cubitt (2014a) and Caraway (2018) had shifted this focus dramatically:

the question was no longer what media say about the environment, but how media, as material infrastructures dependent on mineral extraction, energy consumption, and electronic waste, actively constitute the ecological crisis itself (Parikka, 2015; Bratton, 2015).

This shift has been deepened by more recent contributions. Tola (2026) draws on Stacy Alaimo's concept of trans-corporeality to explore how media not only record but become part of toxic embodiment, in which human bodies, industrial environments, and imaging technologies interpenetrate. Borowski (2026), through the concept of environmental uncanny, challenges photographic practice as a 'geological process' that implicates plant agency and environmental factors as co-creative actors. These approaches mark a convergence between ecomedia and new materialism, a philosophical movement that rejects the nature/culture dualism and emphasises the agency of non-human materials.

The implications of this shift for research practice are considerable. If ecomedia does not merely represent but constitutes ecology, then purely textual analysis becomes insufficient. Methodologies capable of capturing the chains of media production, consumption, and disposal, the carbon footprint, and the labour ecologies behind digital content become necessary (Parks & Starosielski, 2015). An agenda anticipated by Cubitt's (2017) account of the finite energy and mineral resources on which digital media depend. Iheka (2021) provides a model by integrating analysis of murals, music videos, and art installations with infrastructural critique of the oil industry. However, the majority of the corpus continues to operate at the level of representation, a gap that warrants urgent methodological development.

Pluralisation of theoretical frameworks and the risk of fragmentation

The rapid development of new conceptual frameworks, including dark ecomedia, environmental uncanny, MEMA, disanthropic narratives, and others, reflects the intellectual vitality of the field. However, this multiplication also carries the risk of fragmentation. Without integrative efforts, ecomedia may develop into a constellation of ad hoc concepts that are difficult to communicate across sub-fields and to broader academic publics.

The initiative of Ferrigato and Balbi (2026) to propose a media maintenance approach (MEMA) as a 'unified and integrated approach' is noteworthy in this context. MEMA is explicitly designed to unite media archaeology, ecomedia, media sustainability, media history, audience studies, and political economy of communication. Whether such an integrative effort will succeed remains to be seen. What is clear is that the need for bridging theory, that is, frameworks capable of

connecting various conceptual clusters without erasing the richness of each, constitutes an important agenda for the field.

The problem is not merely technical. Conceptual fragmentation also reflects divergent epistemological assumptions and normative commitments. For example, Lopez's (2023) ecomedia literacy rests on the assumption that media can be used emancipatorily for ecological education, while Onnerfors and Mars's (2025) dark ecomedia highlights how media can function as an anti-climate instrument. This tension between pedagogical optimism and critical pessimism is not a contradiction to be resolved but an important part of the field's complexity.

Decolonial turn: rethinking geographies of knowledge

One of the most powerful trends in the corpus is the decolonial movement pioneered by Cubitt (2014a) and deepened by several recent contributions. This orientation extends a longer tradition of postcolonial ecocriticism that links environmental degradation in the Global South to histories of extraction and imperial dispossession (Huggan & Tiffin, 2010). Lopez (2025), through the concept of 'imperfect ecofuturisms,' rejects corporate salvation narratives of the kind found in Black Panther: Wakanda Forever, replacing them with media-making practices that foreground proximity, care, and non-extractive resourcefulness. This approach is rooted in Latinx Futurism and Afrofuturism traditions. Rahmatullah et al. (2026) combine postcolonial ecocriticism with African ecomedia studies to read African eco-documentary as a 'decolonial intervention' that challenges Western environmental determinism. Iheka (2021) develops what he terms 'ecological relationality' as a method, a commitment to working 'across media' as material and as method.

However, this decolonial turn faces structural challenges. As demonstrated by the geographic distribution of authors, knowledge production about Global South ecomedia remains largely carried out by scholars based in Global North institutions. The contributions of Rahmatullah et al. (2026) from Bangladesh and da Fonseca (2024) from Brazil represent important exceptions, yet they are insufficient to neutralise existing structural asymmetries. The challenge for the field is to ensure that the decolonial turn does not remain merely a research theme but extends to a transformation of practice, including who writes, from where, and for what audiences.

From activism to self-critique: the emergence of dark ecomedia

An initial assumption in ecomedia was that media-environment relationships inherently supported ecological agendas; that documentary film, environmental journalism, and visual campaigns

function to educate publics and promote climate action. This assumption has been challenged from multiple directions. Estok (2016) demonstrated that ecomedia can reinforce ecophobia, while Caraway and Caraway (2020) revealed how children's films such as *The Lorax* and *Wall-E* reproduce greenwashing and a depoliticised pastoralism.

Onnerfors and Mars (2025) deepen this self-critique with the concept of dark ecomedia. Their study of the Swedish doom metal band Wardencliff and the music video *Georgia Guidestones/Evilution* (2021) reveals how cultural expression can recycle the Sustainable Development Goals as instruments of authoritarian global control. The concept of 'conspiratorial affect' that they propose demonstrates that ecomedia is not always 'for' climate action: it can serve as a platform for denial, delay, and the delegitimisation of climate action.

The emergence of dark ecomedia carries significant conceptual implications. It broadens the definition of ecomedia beyond the 'green' realm, acknowledging that anti-climate and denialist cultural expression is also ecomedia worthy of analysis. It also pushes the field to develop more nuanced methodologies for understanding media effects, recognising that the consumption of environmental content does not automatically produce ecological awareness and may sometimes produce the opposite. Additionally, it opens a dialogue with research on climate disinformation, political polarisation, and conspiracy theories, fields that have developed in relative separation from mainstream ecomedia.

Pedagogical-critical tensions: ecomedia literacy and its challenges

The development of ecomedia literacy by Lopez (2023) represents a practically significant contribution. It builds on the longer tradition of critical media education, which conceives literacy not merely as decoding skills but as the capacity to question and challenge the ideological work of media representations, reoriented towards ecological concerns through the ecomediasphere heuristic (López, 2020). Organised around four zones of inquiry, the framework provides a pedagogical structure for students to holistically analyse their personal media devices. This approach responds to Cubitt's (2014b) call for methodologies that bridge textual analysis with infrastructural critique.

However, the empirical evaluation conducted by Lo Iacono et al. (2024) yields findings that carry important lessons. An ecomedia literacy lesson based on plastic bottle consumption failed to alter participants' behavioural intentions and only affected some aspects of their attitudes. The authors themselves acknowledge that this result 'indicates the need for significant changes in content and future strategies.' This finding serves as a

reminder that elegant conceptual frameworks do not automatically translate into effective pedagogical interventions. Longer iteration between theory, practice, and measurement is required, a commitment that remains relatively rare in ecomedia scholarship.

This case also illustrates a broader tension in the field. On one hand, there is a drive toward sophisticated theories and deep critical analysis. On the other, if ecomedia is to contribute to a collective response to the climate crisis, it requires praxis that can be evaluated, replicated, and refined. Bridging these two poles, between critique and praxis, between analysis and intervention, remains one of the most pressing challenges for the future of ecomedia.

Limitations and future research

This scoping review has several limitations that warrant acknowledgement. *First*, the use of Scopus as a single source may introduce representation bias toward journals indexed in English, while excluding literature in other languages and non-journal venues such as monographs, edited volumes, and dissertations. The single-keyword search strategy also constrains coverage: articles addressing similar issues but employing different terminology, such as 'environmental media,' 'green media,' or 'eco-cinema,' are not captured within the corpus. *Second*, as a scoping review, this study does not assess the methodological quality of included articles. Findings are therefore not weighted according to the empirical robustness of individual studies. For specific questions, particularly those concerning the effectiveness of ecomedia literacy interventions, a systematic review with rigorous quality criteria would be more appropriate. *Third*, thematic analysis was conducted by the lead author without inter-rater verification, which may limit the reliability of theoretical and methodological categorisation. Future studies involving multi-researcher teams with diverse disciplinary backgrounds could produce more robust mapping. *Fourth*, the observation period extends to April 2026, which means that articles published after that date, including articles currently in press, may not have been captured. Given the rapid growth of the field, periodic updates of this review would be valuable. To align with best practices for scoping reviews outlined by the Joanna Briggs Institute and the PRISMA-ScR guidelines (Peters et al., 2020), future research should aim for greater geographic and linguistic diversity, include grey literature to broaden the evidence base, and adopt more consistent frameworks for defining and measuring ecomedia outcomes.

Based on the comprehensive analysis of the 21 articles in the corpus, this review identifies five priority future research directions. *First*, media-materiality studies require strengthening: although the materiality

turn is a recognised trend, the majority of articles continue to operate at the level of textual representation. More empirical studies measuring the ecological footprint of media production, from conflict minerals in smartphones to the energy consumption of streaming data centres, are needed. Building on accounts that trace the planetary supply chains of extraction, computation, and energy underpinning contemporary digital infrastructures (Marks, 2020). Methodologies combining life-cycle assessment, industrial fieldwork, and policy analysis would be particularly valuable.

Second, evidence-based ecomedia literacy must be developed. The study by Lo Iacono et al. (2024) constitutes an important first step, but requires replication and elaboration. Unanswered questions include: which forms of ecomedia literacy intervention are most effective for different demographic groups? How can long-term impacts be measured? How can ecomedia literacy be integrated into formal school curricula across diverse cultural contexts? Such research necessitates cross-disciplinary collaboration between ecomedia scholars, social psychologists, environmental educators, and data scientists. Beyond its theoretical foundations, the practical development of ecomedia literacy can benefit from insights generated in environmental literacy and sustainability education research, particularly in the Global South. In this respect, ecomedia literacy can draw on the growing body of environmental-literacy and education-for-sustainable-development research in the Global South, where studies have measured students' environmental literacy as a foundation for curriculum reform (Hermawan et al., 2022) and demonstrated that inquiry- and project-based designs, such as STEM project-based learning and systems-thinking approaches to climate change, can strengthen environmental and scientific literacy and reasoning in formal classrooms (Afriana et al., 2016; Ginting et al., 2023; Pertiwi et al., 2024; Shofatun et al., 2024). Integrating these evidence-based pedagogical models with ecomedia literacy offers a promising route toward interventions that are both critically grounded and empirically validated across diverse cultural contexts.

Third, dark ecomedia warrants systematic exploration. Onnerfors and Mars (2025) open a critically important but underexplored research terrain. Questions awaiting answers include: how do climate disinformation ecosystems operate across platforms? How do recommendation algorithms amplify or attenuate dark ecomedia? How is anti-climate content circulated, monetised, and politicised? Such research requires a combination of content analysis, digital ethnography, and network analysis, and must be pursued with urgency given the material consequences of climate delay.

Fourth, decolonial approaches must be integrated into practice rather than remaining a research theme. This entails: (a) increasing collaboration with Global South scholars as equal partners rather than as informants; (b) recognising and integrating indigenous knowledge as a legitimate epistemology rather than as an object of study; (c) considering dissemination strategies that reach non-academic and non-Anglophone audiences; and (d) interrogating epistemological assumptions of ecomedia rooted in European modernity.

Fifth, mixed-methods designs must be elaborated. The dominance of qualitative approaches without sufficient quantitative counterbalance limits ecomedia's capacity to produce generalisable claims. Mixed methods that integrate close reading with surveys, experiments, and computational analysis can strengthen the validity and impact of findings. Developing this methodological capacity requires investment in training, collaboration, and research infrastructure

Conclusion

This scoping review of 21 Scopus-indexed articles has mapped the ecomedia research landscape from 2008 to 2026, yielding three principal findings: bibliometrically, the field has accelerated markedly after 2020 (76.2 percent of the corpus) and diversified geographically toward peripheral regions while remaining dominated by European and North American institutions and dispersed across seventeen journals; theoretically, it has developed into a plural field of eight parallel frameworks, from intermedial and material ecocriticism to emerging concepts such as dark ecomedia, the environmental uncanny, and the media maintenance approach (MEMA); and methodologically, the dominance of qualitative close reading, with only one quantitative experiment, signals a gap in quantitative and mixed-methods research. These patterns surfaced five cross cutting tensions representationalism versus materialism, conceptual pluralisation versus fragmentation, the decolonial turn, the gap between theory and praxis, and centre versus periphery that, rather than being problems to resolve, define ecomedia as a field in motion and motivate five future research directions: strengthening media-materiality studies, developing evidence-based ecomedia literacy, exploring dark ecomedia, integrating decolonial approaches, and elaborating mixed-methods designs. Positioned at the intersection of media studies, environmental humanities, and activist praxis, ecomedia thus holds considerable potential to contribute to collective responses to the climate crisis, provided that future work remains both intellectually rigorous and

practically relevant to the ecological challenges that animate the field.

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Author Contributions

FZ and WS contributed to conceptualization, resources, writing review and editing. Methodology, formal analysis, investigation, data curation, writing original draft preparation, visualization, and project administration were carried out by FZ, CR, and NS. MZ contributed to writing review and editing. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

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