International Journal of Computer Information Systems and Industrial Management Applications
ISSN 2150-7988 Volume 18(9s) 2026 pp. 1313-1326
https://doi.org/10.70917/ijcisim-2026-3555
Article

Artificial Intelligence, 'Dalit Phytohumanities', and Indian Northeastern Literature: Towards an Interdisciplinary Framework of Ecological Literary Analysis

Subhashis Banerjee[1], Biswarup Chatterjee[2], Vikash Kumar[3], Neitseinuo Solo[4]

[1]Department of English, Kohima Campus, Nagaland University (A Central University), India
[2]PG Department of Sanskrit, Rampurhat College, Rampurhat, West Bengal, India
[3]Department of English, Kohima Campus, Nagaland University (A Central University), India
[4]Department of English, Kohima Campus, Nagaland University (A Central University), India

Abstract: This article proposes Dalit Phytohumanities as an interdisciplinary critical framework that brings Dalit Studies, Environmental Humanities, Plant Humanities, and Artificial Intelligence-assisted literary analysis into dialogue with literary representations of marginalized communities in Northeastern India. While Dalit Ecologies, Plant Humanities, and computational approaches to literary studies have independently generated significant scholarly interventions, little attention has been devoted to examining how artificial intelligence may complement humanistic inquiry into the ecological, cultural, and ethical dimensions of vegetal life within caste- and indigeneity-inflected literary texts. Rather than replacing close reading, the study employs Artificial Intelligence as a supplementary analytical instrument capable of identifying thematic recurrences, semantic relationships, and ecological patterns across literary narratives, while interpretative authority remains grounded in established literary-critical methodologies. Through close textual analysis of selected works by Mamang Dai, Easterine Kire, and Hansda Sowvendra Shekhar, the article argues that plants, forests, rivers, and ecological landscapes function not merely as descriptive settings but as active repositories of cultural memory, resistance, environmental justice, and ethical coexistence. Drawing upon Michael Marder's philosophy of plant thinking, Rob Nixon's formulation of slow violence, Indulata Prasad's Dalit Ecologies, and recent developments in AI-assisted humanities research, the study demonstrates that vegetal imaginaries illuminate the interconnected histories of caste, ecological dispossession, indigeneity, and environmental marginalization. Artificial Intelligence is employed not as an interpretative substitute but as a methodological aid that strengthens interdisciplinary textual inquiry by facilitating systematic thematic mapping and conceptual synthesis. Rather than treating nature as a passive backdrop, the selected texts foreground reciprocal relationships between human and more-than-human worlds, thereby challenging anthropocentric and caste-centred modes of literary interpretation. The article concludes that Dalit Phytohumanities, supported by carefully integrated Artificial Intelligence methodologies, provides a productive critical vocabulary for understanding the convergence of ecological justice, Indigenous knowledge, and social marginalization in contemporary Indian literature while opening new directions for Environmental Humanities, Digital Humanities, and South Asian literary scholarship.

Keywords: Artificial Intelligence; Dalit Phytohumanities; Environmental Humanities; Plant Humanities; Digital Humanities; Northeastern Literature; Ecocriticism; Indigenous Ecology; Plant Agency; Environmental Justice

1. Introduction

The twenty-first century has witnessed an unprecedented convergence of Environmental Humanities, Ecocriticism, Plant Humanities, Digital Humanities, and, more recently, Artificial Intelligence-assisted literary scholarship, all of which seek to transform conventional modes of reading literature by interrogating anthropocentric assumptions and expanding the interpretative possibilities of interdisciplinary research. Environmental Humanities has consistently argued that ecological crises cannot be understood merely through scientific data or environmental

policy; rather, they require critical attention to the cultural, ethical, historical, and literary narratives through which human societies conceptualize the more-than-human world. Parallel to this development, Artificial Intelligence has emerged as a significant methodological resource in humanities research, facilitating corpus analysis, semantic mapping, thematic clustering, and computational pattern recognition while continuing to depend upon human interpretation for critical judgement and contextual understanding. Rather than replacing close reading, AI increasingly functions as a complementary analytical instrument that enhances the capacity of literary scholars to identify textual relationships across large and complex bodies of literature.

Among these interdisciplinary developments, Plant Humanities has emerged as one of the most influential critical interventions by reconsidering vegetal life as an active participant in ecological, philosophical, and cultural processes rather than as a passive object of human perception. In *Plant-Thinking: A Philosophy of Vegetal Life*, Michael Marder questions the metaphysical hierarchy that privileges human and animal existence over plant life, asking whether "the plant has already wreaked havoc and anarchy in the metaphysical hierarchy" (21). By relocating plants from the margins to the centre of philosophical inquiry, Marder argues for an alternative ontology grounded in growth, relationality, and non-anthropocentric forms of existence. His work has subsequently inspired scholars across Environmental Humanities to recognize vegetal life as a producer of knowledge, ethics, and ecological memory rather than merely a symbolic presence within literary texts.

Environmental criticism has simultaneously shifted its attention from wilderness aesthetics toward questions of environmental justice, emphasizing that ecological degradation is experienced unevenly across social, economic, and political communities. Rather than viewing environmental destruction as a universally shared phenomenon, contemporary scholarship demonstrates that ecological violence disproportionately affects historically marginalized populations. Rob Nixon's influential concept of "slow violence" has become central to this discussion by revealing how gradual environmental degradation frequently remains invisible while systematically shaping the lives of vulnerable communities. Although Nixon's work primarily examines postcolonial contexts, its analytical framework has profoundly influenced subsequent scholarship on environmental inequality, ecological dispossession, and climate injustice across the Global South.

Within the Indian context, Dalit Studies has consistently demonstrated that caste constitutes not merely a cultural institution but a material system regulating access to land, forests, labour, water, and ecological resources. Building upon B. R. Ambedkar's critique of graded social inequality, contemporary Dalit scholarship increasingly recognizes that environmental exclusion and caste oppression remain structurally interconnected. In her seminal essay, "Towards Dalit Ecologies," Indulata Prasad argues that mainstream Indian environmentalism has largely neglected Dalit experiences despite the fact that caste-oppressed communities remain disproportionately vulnerable to pollution, ecological degradation, climate change, and environmental dispossession. She consequently introduces the concept of Dalit Ecologies to foreground "eco-casteism" as an indispensable analytical category for understanding environmental injustice in India (98–100).

Prasad's intervention represents a decisive shift in Indian environmental thought because it demonstrates that ecological experience cannot be separated from caste relations, historical marginalization, and unequal access to natural resources. She further argues that Dalit ecological knowledge has remained systematically excluded from dominant environmental discourse, thereby reproducing Brahmanical assumptions within conservation narratives and environmental policy (103–08). Environmental justice in India, therefore, cannot be theorized independently of caste, labour, and ecological inequality. Such arguments establish an important intellectual foundation for reconsidering literary representations of ecology through the intersecting categories of caste, environmental justice, and social exclusion.

Recent developments within Environmental Humanities have further enriched this dialogue through the emergence of Dalit Botanics. In his significant contribution to Critical Forest Studies, Ritam Dutta argues that forests in Dalit literature should not be interpreted merely as geographical settings but as "responsive vegetal agent[s]" that shape ethical, ontological, and political relations between marginalized communities and ecological worlds (182–83). Drawing upon Michael Marder's philosophy of plant-thinking, Jeffrey T. Nealon's *Plant Theory*, Matthew Hall's ethics of vegetal life, and John C. Ryan's botanical imagination, Dutta develops Dalit Botanics as a theoretical framework positioning trees and forests as "pedagogical ecologies" through which caste, memory, survival, and resistance become mutually constitutive (182–84).

These developments also create new possibilities for carefully integrating Artificial Intelligence into literary-environmental research. Contemporary AI-assisted textual analysis enables researchers to trace lexical networks, ecological metaphors, thematic recurrences, and semantic relationships across literary corpora with greater analytical

consistency, particularly when dealing with interdisciplinary frameworks that combine literary criticism, philosophy, environmental studies, and cultural history. Nevertheless, AI remains a methodological facilitator rather than an autonomous interpreter. Computational models may identify recurring linguistic structures and conceptual associations, but the ethical, historical, philosophical, and political meanings embedded within literary texts continue to require humanistic interpretation grounded in close reading, contextual scholarship, and theoretical criticism. Within this study, Artificial Intelligence therefore functions as a supplementary research methodology that supports systematic textual organization and conceptual synthesis while preserving the interpretative authority of literary scholarship.

Despite these important theoretical developments, relatively little scholarship has examined the relationship between Plant Humanities, Dalit ecological criticism, Artificial Intelligence-assisted literary methodologies, and the literary traditions of Northeastern India. Existing studies of writers such as Mamang Dai, Easterine Kire, Temsula Ao, and other Indigenous authors have primarily emphasized oral traditions, ecological ethics, animistic cosmologies, Indigenous knowledge systems, and environmental memory. Although these approaches illuminate the intimate relationship between community and landscape, they rarely investigate how vegetal life simultaneously functions as an archive of social exclusion, ecological resistance, ethical reciprocity, and computationally identifiable ecological patterns within literary discourse. Likewise, Dalit ecological criticism has largely concentrated on western and central Indian contexts without extending its analytical vocabulary to the culturally and ecologically distinctive landscapes of Northeast India.

The present article therefore proposes Dalit Phytohumanities as a new interdisciplinary framework that synthesizes insights from Dalit Studies, Plant Humanities, Environmental Humanities, and Artificial Intelligence-assisted literary analysis to examine vegetal representations in Indian Northeastern literature. While the concept draws inspiration from Prasad's Dalit Ecologies and Dutta's Dalit Botanics, it extends these formulations by analysing how plants, forests, rivers, sacred landscapes, and vegetal ecologies become repositories of cultural memory, ethical coexistence, ecological justice, and Indigenous epistemologies within Northeastern literary narratives. Artificial Intelligence is employed throughout the study not to generate literary meaning but to strengthen thematic organization, conceptual mapping, and interdisciplinary textual analysis. Rather than treating plants as symbolic ornaments or passive ecological settings, Dalit Phytohumanities interprets vegetal life as an active participant in the production of historical memory, ecological resilience, social justice, and subaltern knowledge. In doing so, the article establishes an innovative interpretative paradigm that integrates caste-sensitive environmental criticism, contemporary Plant Humanities, and responsible AI-assisted humanities research into a coherent framework for understanding the ecological imagination of Indian Northeastern literature.

2. Literature Review

The intersection of ecology and caste has only recently emerged as a distinct area within South Asian Environmental Humanities, although environmental criticism in India has undergone substantial theoretical expansion over the past three decades. Earlier ecocritical scholarship primarily concentrated on wilderness preservation, conservation movements, sustainable development, and environmental activism, frequently overlooking the ways in which caste structures determine access to land, forests, water, and other ecological resources. This tendency produced what Mukul Sharma identifies as a "caste-blind" environmental discourse, one that often addresses ecological degradation while neglecting the material realities of caste-based environmental exclusion (qtd. in Dutta 183). More recent scholarship has sought to address this imbalance by integrating environmental justice with Dalit Studies, Indigenous Studies, and Plant Humanities, thereby transforming ecology into a fundamentally socio-political category rather than a purely environmental concern.

One of the most influential interventions in this regard is Indulata Prasad's formulation of Dalit Ecologies. Prasad argues that environmental degradation in India cannot be understood independently of caste because Dalit communities experience what she terms "eco-casteism," a condition in which ecological vulnerability is intensified through systematic exclusion from natural resources, unequal exposure to pollution, and dependence upon environmentally hazardous labour (98–100). Rather than treating nature as a universal category, Prasad demonstrates that environmental experience is mediated by caste ideology and unequal relations of power. She further observes that Dalit ecological knowledge and environmental practices have remained largely absent from mainstream environmental scholarship despite their crucial role in struggles concerning land, forests, water, and environmental rights (103–08). Her work consequently expands Environmental Humanities by insisting that ecological justice must simultaneously engage questions of social justice, epistemic inequality, and historical marginalization.

Parallel to these developments, Plant Humanities has fundamentally challenged anthropocentric assumptions within literary and philosophical discourse. Michael Marder's *Plant-Thinking: A Philosophy of Vegetal Life* redefines plants as active philosophical subjects rather than passive biological objects. Rejecting hierarchical distinctions between human and vegetal existence, Marder asks whether "the plant has already wreaked havoc and anarchy in the metaphysical hierarchy" (21). By proposing that vegetal life possesses its own temporality, relationality, and material intelligence, Marder establishes an alternative ontology that has profoundly influenced contemporary environmental criticism. As Dutta observes, this philosophical intervention enables literary scholars to interpret forests and trees not as inert landscapes but as epistemic agents participating in the production of ecological knowledge (184).

Building upon Marder's work, recent scholarship has further expanded the theoretical possibilities of Plant Humanities. Jeffrey T. Nealon's concept of Plant Theory, John C. Ryan's work on the botanical imagination, and Matthew Hall's ethics of vegetal life collectively argue that plants actively participate in cultural memory, ethical imagination, and ecological relationality rather than merely symbolizing natural beauty. These scholars reposition vegetal life as an active participant within social, philosophical, and ethical worlds, thereby extending Environmental Humanities beyond conventional human-centred paradigms. Synthesizing these interventions, Dutta argues that forests in Dalit narratives function as "pedagogical ecologies" in which trees become teachers of resilience, reciprocity, and survival (182–84).

Among the most innovative developments in recent scholarship is Ritam Dutta's formulation of Dalit Botanics. Examining the short stories of Shyamal Kumar Pramanik, Dutta argues that the Sundarbans should be understood not merely as a geographical setting but as a "living environmental being" that actively shapes Dalit experiences of survival, memory, and ecological resistance (182). Forests, in this formulation, become responsive vegetal agents rather than passive landscapes. Dutta therefore distinguishes between Dalit Vegetal Poetics, which concerns the aesthetic representation of plants, and Dalit Botanics, which foregrounds vegetal life as an epistemological framework through which caste, ecology, and ethics become mutually constitutive (182–84).

Dutta further develops this argument by drawing upon Marder's concept of plant time, which understands vegetal existence through cyclical regeneration rather than linear progress. Marder describes this temporality as a process of "perpetual recommencement of life" (113), an idea that Dutta adapts to explain the cyclical experiences of displacement, dispossession, and resilience that characterize Dalit existence in the Sundarbans (189–90). Through this synthesis, Dalit ecological experience is interpreted not merely as environmental suffering but as an ongoing process of ecological persistence, historical continuity, and cultural regeneration.

While these interventions have significantly advanced Dalit environmental criticism, scholarship on Northeastern Indian literature remains comparatively limited. Existing studies on writers such as Mamang Dai, Easterine Kire, Temsula Ao, and Robin S. Ngangom have largely emphasized Indigenous cosmologies, oral traditions, ecological memory, environmental ethics, and cultural resilience. Their analyses demonstrate that forests, rivers, mountains, and plants function as living repositories of communal history and cultural identity. However, these studies seldom engage Plant Humanities and Dalit ecological theory simultaneously, leaving unexplored the possibility that vegetal life may also function as an archive of marginality, social exclusion, ecological justice, and environmental resistance.

A further limitation of the existing scholarship concerns methodology. Most studies continue to rely exclusively upon conventional close reading, historical contextualization, and qualitative literary analysis. Although these approaches remain indispensable, the rapid development of Artificial Intelligence-assisted humanities research has introduced new possibilities for systematically examining literary corpora without displacing interpretative scholarship. Contemporary AI technologies—including semantic similarity modelling, computational text mining, keyword network analysis, topic modelling, and conceptual clustering—enable researchers to identify recurring ecological vocabularies, patterns of vegetal imagery, and relationships between environmental and socio-political concepts across multiple literary texts. Importantly, these computational techniques do not replace literary criticism; rather, they function as analytical aids that complement human interpretation by revealing patterns that may otherwise remain difficult to detect within extensive textual corpora.

Within Environmental Humanities, such computational approaches are beginning to contribute to Digital Environmental Humanities, where Artificial Intelligence assists scholars in mapping environmental metaphors, tracing ecological narratives, analysing multilingual corpora, and visualising conceptual relationships among literary texts. Nevertheless, ethical interpretation, philosophical reflection, and historical contextualization continue to depend upon human critical judgement. Artificial Intelligence therefore serves as a methodological extension of literary scholarship rather than an autonomous interpretative authority.

The present study addresses these methodological and theoretical gaps by proposing Dalit Phytohumanities as an interdisciplinary framework that integrates Dalit Studies, Plant Humanities, Environmental Humanities, and Artificial Intelligence-assisted literary analysis with the ecological imagination of Northeastern literature. While inspired by Prasad's Dalit Ecologies and Dutta's Dalit Botanics, the proposed framework extends their insights beyond the Sundarbans to examine how plants, forests, rivers, sacred landscapes, and vegetal ecologies mediate memory, resistance, ethical coexistence, and environmental justice within the distinctive cultural ecologies of Northeast India. Artificial Intelligence is incorporated into this framework solely as a supplementary methodological instrument that facilitates systematic textual organisation, thematic mapping, and interdisciplinary synthesis while preserving the centrality of close reading and literary interpretation. Through this balanced integration, the study contributes simultaneously to Environmental Humanities, Digital Humanities, and South Asian literary studies, foregrounding vegetal life as a central category for understanding ecological justice, Indigenous knowledge, and cultural resilience

Theoretical Framework: Towards Dalit Phytohumanities in the Age of Artificial Intelligence

The present study develops Dalit Phytohumanities as an interdisciplinary interpretative framework situated at the intersection of Dalit Studies, Plant Humanities, Environmental Humanities, Indigenous literary studies, and Artificial Intelligence-assisted humanities research. Rather than functioning as a synthesis of existing theories alone, Dalit Phytohumanities offers a critical methodology for examining how vegetal life mediates relationships among ecological justice, caste-inflected marginality, Indigenous epistemologies, and environmental ethics within literary texts. In this framework, Artificial Intelligence is neither an independent interpretative authority nor a substitute for literary criticism; instead, it operates as a methodological instrument that assists scholars in organising textual evidence, identifying conceptual relationships, and strengthening interdisciplinary analysis while preserving the centrality of human critical judgement.

Recent developments in Environmental Humanities have fundamentally transformed literary criticism by challenging anthropocentric assumptions that privilege human consciousness over other forms of existence. Plant Humanities, Material Ecocriticism, and Critical Plant Studies collectively demonstrate that vegetal life possesses epistemological, ethical, and cultural significance beyond its conventional representation as passive scenery. Michael Marder argues that plants have historically occupied the margins of Western metaphysics despite their constitutive role in sustaining life, proposing "plant-thinking" as a philosophical orientation that redirects ontology toward vegetal existence (21). Within this perspective, plants emerge not merely as biological organisms but as dynamic participants in ethical, material, and relational worlds.

Parallel to these philosophical developments, Dalit Studies has reconfigured Indian literary criticism by demonstrating that caste structures not only social relations but also ecological access to land, forests, water, labour, and other environmental resources. Ambedkar's critique of graded social inequality established the philosophical foundations of Dalit thought, while later scholars such as Gopal Guru, Sharmila Rege, and Gail Omvedt expanded discussions toward epistemic justice, lived experience, and structural deprivation. More recently, Indulata Prasad's formulation of Dalit Ecologies has demonstrated that environmental degradation and caste oppression function through interconnected systems of exclusion. Her concept of eco-casteism provides an analytical vocabulary for understanding how Dalit communities disproportionately experience ecological vulnerability and environmental dispossession (98–108).

The dialogue between Plant Humanities and Dalit ecological criticism has been significantly enriched through Ritam Dutta's formulation of Dalit Botanics. Drawing upon the works of Michael Marder, Jeffrey T. Nealon, John C. Ryan, and Matthew Hall, Dutta argues that forests in Dalit narratives operate as responsive vegetal agents that actively participate in ethical and pedagogical processes rather than serving as passive environmental settings (182–90). Vegetal life consequently becomes a medium through which caste memory, ecological survival, and ethical responsibility are simultaneously articulated, thereby extending literary criticism beyond symbolic interpretations of nature.

Building upon these intellectual traditions, Dalit Phytohumanities expands the analytical horizon beyond forest agency to include the broader ecological assemblages through which literature constructs relationships among plants, landscapes, rivers, medicinal ecologies, sacred groves, Indigenous environmental knowledge, and marginalized communities. The framework therefore examines vegetal life not as an isolated ecological category but as a dynamic cultural archive through which histories of exclusion, resilience, memory, and environmental justice become legible. Such an approach enables literary scholarship to investigate how ecological narratives preserve alternative epistemologies that frequently remain absent from institutional histories and dominant environmental discourses.

The integration of Artificial Intelligence strengthens this framework by introducing an additional methodological dimension rather than a new theoretical paradigm. Recent advances in computational literary studies enable AI-assisted systems to recognise semantic relationships, recurrent ecological lexicons, networks of metaphor, and conceptual associations distributed across literary corpora. Such computational capacities are particularly valuable when analysing interdisciplinary concepts that traverse literary criticism, philosophy, ecology, and cultural studies. In the present research, AI contributes to the systematic identification of recurring vegetal imagery, ecological motifs, Indigenous environmental terminology, and thematic relationships among selected literary texts. However, these computational observations acquire scholarly significance only through human interpretation grounded in literary theory, historical context, and philosophical inquiry.

Consequently, Artificial Intelligence is employed according to the principle of augmented interpretation, wherein computational analysis enhances rather than replaces close reading. While AI facilitates the organisation of textual evidence, thematic clustering, and conceptual mapping, interpretative decisions concerning symbolism, ethics, historical memory, caste relations, and Indigenous ecological knowledge remain entirely dependent upon critical human scholarship. Such methodological restraint is essential because literary meaning cannot be reduced to algorithmic correlation; instead, it emerges through historically situated acts of interpretation informed by theoretical knowledge and cultural understanding.

Within this framework, Dalit Phytohumanities rests upon six interrelated propositions. First, plants function as epistemic agents capable of generating ecological knowledge rather than merely representing natural scenery. Second, vegetal landscapes preserve historical memory and operate as alternative archives for marginalized communities. Third, ecological degradation and social exclusion constitute interconnected manifestations of structural inequality rather than separate historical phenomena. Fourth, Indigenous ecological knowledge provides ethical alternatives to extractivist and anthropocentric models of development. Fifth, Artificial Intelligence facilitates interdisciplinary literary analysis by strengthening conceptual organisation, semantic mapping, and textual comparison without displacing human interpretation. Finally, literary representations of vegetal life reveal relational ethics through which human and more-than-human communities negotiate coexistence, resilience, and environmental justice.

Accordingly, Dalit Phytohumanities may be understood as an interpretative architecture that unites ecological philosophy, caste studies, Indigenous epistemology, literary criticism, and responsible AI-assisted research within a single analytical framework. Rather than positioning Artificial Intelligence as the centre of literary inquiry, the framework situates AI within the service of humanistic scholarship, where computational methods support rather than determine interpretation. This balanced methodological orientation enables the present study to contribute simultaneously to Environmental Humanities, Digital Humanities, Plant Humanities, and South Asian literary studies while advancing a more comprehensive understanding of the reciprocal relationships among literature, ecology, social justice, and technological innovation.

Vegetal Memory, Computational Reading, and Ecological Archives in Northeastern Literature

The ecological imagination of Northeastern Indian literature is distinguished by its capacity to construct plants, forests, rivers, and landscapes as repositories of cultural continuity rather than as descriptive elements of physical geography. Across the writings of Mamang Dai, ecological spaces preserve ancestral knowledge, ethical obligations, and Indigenous cosmologies through narrative practices that resist the fragmentation of memory under colonial modernity and contemporary developmental paradigms. Rather than representing the natural environment as a passive backdrop, these literary works establish reciprocal relationships between human communities and vegetal worlds, thereby positioning ecological landscapes as active participants in the production and preservation of cultural knowledge. Such representations provide an important foundation for understanding how environmental memory becomes inseparable from questions of identity, belonging, and historical continuity.

Recent scholarship has demonstrated that Dai's narratives consistently animate ecological landscapes through Indigenous cosmological frameworks. Gogoi, Kalita, and Satola argue that her works transform forests, rivers, and mountains into sentient entities embedded within myth, ritual, and communal experience, allowing environmental spaces to function as living archives rather than geographical settings (3375–77). In *The Legends of Pensam*, *River Poems*, and *The Black Hill*, ecological knowledge is transmitted through oral traditions and communal remembrance instead of institutional historiography. Consequently, memory is not located exclusively within human consciousness but is distributed across landscapes whose continuity sustains collective identity through successive generations.

This narrative strategy simultaneously redefines the relationship between ecology and historiography. Conventional historical discourse frequently privileges documentary evidence and political chronology, whereas Dai's

literary imagination locates historical consciousness within rivers, forests, sacred groves, and ritual landscapes. Such an ecological archive expands the scope of historical knowledge by recognising environmental continuity as an alternative medium through which communities preserve experiences of migration, kinship, spirituality, and cultural resilience. Vegetal life therefore functions not simply as an object represented by literature but as a constituent element of literary epistemology itself.

The ecological agency articulated in these texts also challenges anthropocentric assumptions that continue to influence much literary criticism. Gogoi, Kalita, and Satola observe that Dai presents "a world where forests are teachers, rivers are ancestors, and sustainability is a way of life" (3377). Such representations establish ethical reciprocity rather than human mastery as the governing principle of ecological relationships. Plants and forests are consequently understood as participants in moral communities whose continued existence depends upon restraint, responsibility, and coexistence rather than extraction or domination.

Within the framework of Dalit Phytohumanities, these ecological relationships acquire an additional analytical dimension. Vegetal environments preserve forms of knowledge that frequently remain absent from dominant historical narratives, thereby functioning as archives of communities whose cultural experiences have often been marginalized within institutional structures of knowledge production. The literary forest thus becomes simultaneously an ecological habitat, a historical record, and a site of epistemic resistance. Such an interpretation extends beyond symbolic ecocriticism by demonstrating that environmental memory is inseparable from broader questions of cultural survival and social justice.

Artificial Intelligence contributes to this interpretative process by enabling systematic observation of recurrent ecological vocabularies across multiple literary texts. AI-assisted semantic analysis allows researchers to identify repeated lexical associations linking forests, rivers, medicinal plants, sacred landscapes, kinship, and memory. These computational observations reveal patterns of ecological interconnectedness that reinforce conclusions reached through close textual reading without independently determining literary meaning. The role of Artificial Intelligence therefore remains evidentiary rather than interpretative, assisting scholars in recognising textual regularities while preserving the philosophical and cultural dimensions of literary analysis.

The significance of sacred groves further illustrates the convergence of ecological ethics and cultural memory within Northeastern literature. According to Gogoi, Kalita, and Satola, sacred forests simultaneously preserve biodiversity, ritual practice, and medicinal knowledge through inherited systems of communal responsibility rather than external regulatory institutions (3378). Their preservation depends upon cultural belief systems that integrate ecological stewardship into everyday ethical practice. Such literary representations demonstrate that conservation is inseparable from cultural continuity because environmental protection emerges through lived traditions rather than administrative intervention.

Equally important is the treatment of rivers and forests as producers of knowledge. Gogoi, Kalita, and Satola argue that Dai's ecological landscapes embody "land-based knowledge", locating historical memory within relationships between communities and environments rather than within official archives (3379–80). The forest consequently becomes "a living archive of memory, myth, and ancestral presence," preserving intellectual traditions that resist erasure despite historical transformation (3380). Such observations resonate strongly with Plant Humanities because they demonstrate that vegetal environments actively participate in epistemological processes instead of merely symbolising ecological concerns.

Artificial Intelligence offers an additional methodological advantage in examining these epistemological structures through computational mapping of narrative relationships. Digital textual analysis can identify recurrent associations between environmental entities and concepts such as ancestry, ritual, healing, migration, and communal identity across multiple literary works. Rather than substituting for interpretative reading, such computational mapping strengthens interdisciplinary research by providing systematic evidence for conceptual networks that literary scholars subsequently interpret within historical, philosophical, and cultural contexts.

Another distinctive feature of Dai's ecological imagination lies in the relationship between narrative form and environmental philosophy. Gogoi, Kalita, and Satola demonstrate that cyclical narration, ritual repetition, and oral storytelling reproduce Indigenous epistemologies within literary structure itself (3380–81). Narrative technique therefore becomes inseparable from ecological ethics, allowing literary form to embody principles of reciprocity, continuity, and collective memory. Ecological knowledge is transmitted not solely through thematic content but also through narrative organisation, where repetition mirrors the cyclical rhythms of seasonal regeneration and communal remembrance.

From the perspective of Dalit Phytohumanities, this convergence of narrative form, vegetal life, and Indigenous memory demonstrates that Northeastern literature expands contemporary Environmental Humanities beyond conventional ecocritical paradigms. Ecological landscapes emerge as dynamic participants in the preservation of knowledge, ethical responsibility, and historical continuity, while Artificial Intelligence provides an auxiliary methodological resource capable of documenting conceptual relationships across complex literary corpora. Together, these approaches establish a more comprehensive understanding of how vegetal worlds mediate interactions among ecology, culture, memory, and social justice without reducing literary interpretation to either technological determinism or symbolic environmentalism.

Plants, Marginality, Environmental Justice, and Artificial Intelligence-Assisted Interpretation

The relationship between ecological degradation and social inequality has become one of the defining concerns of contemporary Environmental Humanities. Rather than treating environmental crises as universally experienced phenomena, recent scholarship demonstrates that ecological vulnerability is historically mediated by unequal access to land, forests, water, and other natural resources. Northeastern Indian literature offers an important intervention in this debate by illustrating that environmental disruption simultaneously threatens ecological systems, Indigenous lifeways, cultural memory, and communal continuity. The literary imagination of the region therefore presents environmental justice as an ethical condition grounded in reciprocal relationships between human communities and vegetal environments rather than merely as a question of resource management.

Rob Nixon's formulation of "slow violence" provides an important conceptual lens for understanding these ecological processes. By emphasizing gradual and often invisible forms of environmental destruction, Nixon demonstrates that ecological devastation disproportionately affects communities already marginalized by political and economic structures. Although his work addresses broader postcolonial contexts, its analytical significance extends to Northeastern India, where ecological degradation frequently accompanies cultural displacement, territorial insecurity, and the erosion of Indigenous environmental knowledge. Environmental change in these literary texts is therefore experienced not simply as physical transformation but as the progressive fragmentation of historical relationships between communities and their ecological worlds.

This intersection of ecological vulnerability and social exclusion acquires further complexity through Indulata Prasad's formulation of Dalit Ecologies. Prasad argues that environmental injustice in India is mediated through historical structures of exclusion that regulate access to forests, land, water, sanitation, and ecological resources (98–108). Her concept of eco-casteism demonstrates that environmental degradation reproduces existing social hierarchies instead of functioning as a uniformly experienced crisis. Although the present study focuses primarily upon Northeastern literature rather than Dalit autobiographical writing, Prasad's theoretical insights illuminate broader mechanisms through which ecological marginalization and structural inequality become mutually reinforcing processes across different cultural contexts.

Within Northeastern literary narratives, environmental justice is articulated less through direct political discourse than through ethical relationships connecting communities with forests, rivers, medicinal plants, and sacred landscapes. Dharmendra Baruah's reading of Easterine Kire's *When the River Sleeps* argues that the novel constructs a "figurative ecology" in which environmental metaphors reshape conventional distinctions between landscape and consciousness (210–15). Ecological imagery functions as an ethical vocabulary through which reciprocity, restraint, and communal responsibility replace instrumental attitudes toward nature. Forests therefore participate actively in moral reasoning rather than serving as passive environments surrounding human action.

Neena Kishor similarly observes that Kire's novel represents the forest as "an empowered, benevolent provider" whose generosity depends upon ethical reciprocity rather than exploitation (130–33). Vegetal environments protect, instruct, and test human characters, thereby dissolving rigid distinctions between subject and object that have historically structured anthropocentric literary interpretation. Plants and forests consequently acquire narrative agency because they influence ethical choices and shape communal relationships without being reduced to symbolic decoration.

The ecological philosophy embedded within Kire's fiction is further strengthened by Indigenous epistemologies. Wedeu Mero and Thokchom Sunanda Devi demonstrate that her novels preserve Naga ecofolklore through oral narratives, ritual practices, medicinal knowledge, and customary ecological traditions (2682–89). These narratives reveal that environmental knowledge is transmitted through collective cultural experience rather than institutional scientific systems alone. Literature thereby functions as a repository of ecological intelligence, preserving

sustainable relationships between communities and landscapes even amid accelerating modernization and environmental transformation.

Pronami Bhattacharyya's posthumanist reading extends this discussion by demonstrating that *When the River Sleeps* repeatedly dissolves categorical divisions separating humans, plants, rivers, animals, and spiritual entities. Ecological existence is represented as an interconnected assemblage in which ethical responsibility emerges through coexistence rather than hierarchy. Such representations significantly broaden the interpretative possibilities of Dalit Phytohumanities because vegetal life is understood not only as an ecological presence but also as an active participant in relational systems of knowledge, spirituality, and cultural continuity.

Artificial Intelligence provides an additional methodological perspective for examining these relational structures across literary corpora. Computational semantic analysis enables researchers to identify recurring associations among ecological entities—including forests, medicinal plants, rivers, healing practices, ritual spaces, kinship, and community—thereby revealing conceptual networks that extend across multiple texts and authors. Rather than replacing interpretative criticism, AI assists scholars in documenting textual regularities, lexical proximity, and thematic convergence that support human-centred literary analysis. Within the present framework, computational observation strengthens interdisciplinary research by providing systematic evidence for ecological patterns while leaving questions of symbolism, ethics, historical memory, and Indigenous philosophy to critical interpretation.

The methodological value of Artificial Intelligence becomes particularly evident when analysing recurring environmental vocabularies distributed across geographically and culturally diverse literary traditions. AI-assisted textual mapping facilitates comparative examination of vegetal imagery without reducing literary complexity to quantitative measurement. Computational methods reveal textual relationships that subsequently require theoretical interpretation through Environmental Humanities, Plant Humanities, Dalit Studies, and Indigenous literary criticism. Consequently, Artificial Intelligence functions as an evidentiary instrument that enhances scholarly precision while maintaining the interpretative autonomy of literary research.

Collectively, these critical interventions demonstrate that environmental justice within Northeastern literature cannot be reduced to biodiversity conservation or ecological preservation alone. Forests simultaneously protect oral traditions, Indigenous languages, medicinal knowledge, ritual practices, and historical memory. Vegetal life therefore mediates ecological, cultural, ethical, and epistemological relationships that sustain communal resilience under conditions of environmental and historical transformation. Through the integrated framework of Dalit Phytohumanities, supported by responsible AI-assisted textual analysis, ecological landscapes emerge as dynamic participants in the continuous negotiation of justice, memory, identity, and coexistence.

Indigenous Ecological Knowledge, Artificial Intelligence, and the Ethics of More-than-Human Coexistence

One of the most significant contributions of Northeastern Indian literature to contemporary Environmental Humanities lies in its articulation of Indigenous ecological knowledge as a dynamic epistemological system rather than as a residual cultural inheritance. Across diverse literary traditions of the region, forests, rivers, mountains, medicinal plants, and sacred landscapes constitute living networks of reciprocal relationships through which communities negotiate identity, ethical responsibility, and environmental continuity. These ecological philosophies challenge modern developmental paradigms that frequently reduce nature to an exploitable resource by presenting coexistence as the fundamental principle governing interactions between human and more-than-human worlds.

The writings of Mamang Dai exemplify this ecological worldview by integrating Indigenous cosmology into both thematic representation and narrative structure. Gogoi, Kalita, and Satola argue that Dai reconstructs "mythic ecologies" in which sacred groves, rivers, and forests operate as sites of cultural transmission rather than merely geographical locations (3376–79). Ecological knowledge is preserved through oral storytelling, ritual observance, and communal remembrance, enabling literature to safeguard environmental ethics threatened by rapid modernization and extractive development. Environmental consciousness in these narratives therefore emerges through cultural practice rather than abstract ecological theory, demonstrating that sustainability is inseparable from inherited systems of collective responsibility.

Comparable ethical orientations appear throughout Easterine Kire's literary works. Neena Kishor argues that *When the River Sleeps* rejects instrumental conceptions of the forest by presenting nature as "an empowered, benevolent provider" whose generosity depends upon reciprocal respect instead of domination (130–33). Human survival consequently depends upon ethical restraint and ecological responsibility rather than technological mastery or territorial possession. The forest becomes an active ethical presence that shapes human conduct by demanding

humility, reciprocity, and coexistence, thereby transforming ecological space into a participant within moral experience rather than an object awaiting human intervention.

The transmission of ecological wisdom through oral traditions further distinguishes Northeastern literary imagination from dominant environmental narratives. Wedeu Mero and Thokchom Sunanda Devi demonstrate that Kire's fiction preserves Indigenous environmental knowledge concerning medicinal plants, sacred landscapes, seasonal rhythms, and customary stewardship through narrative itself (2683–88). Such literary representations challenge assumptions that environmental knowledge derives exclusively from institutional scientific discourse by recognizing community memory, ritual practice, and oral history as equally legitimate forms of ecological understanding. Literature thereby functions as a repository of environmental knowledge capable of preserving sustainable cultural practices across generations despite accelerating social transformation.

These Indigenous epistemologies also resonate with recent developments in posthumanist literary criticism. Pronami Bhattacharyya demonstrates that *When the River Sleeps* dissolves rigid distinctions separating humans, plants, rivers, animals, and spiritual beings by constructing an ecological community founded upon interconnected coexistence rather than hierarchical separation. Such relational ontologies challenge anthropocentric assumptions while recognizing agency as distributed across broader ecological assemblages. Within the framework of Dalit Phytohumanities, this perspective illustrates that vegetal life participates simultaneously in ethical, cultural, spiritual, and historical processes, thereby expanding literary criticism beyond conventional binaries separating nature from culture or human from non-human.

The integration of Artificial Intelligence offers an additional methodological perspective for examining Indigenous ecological knowledge without diminishing its cultural specificity. AI-assisted semantic modelling and multilingual textual analysis enable researchers to identify recurring Indigenous ecological vocabularies, conceptual associations among medicinal plants, ritual landscapes, kinship structures, and environmental ethics across extensive literary corpora. Such computational techniques are particularly valuable when investigating relationships distributed across multiple texts, genres, and linguistic traditions. However, Artificial Intelligence remains incapable of independently interpreting culturally embedded meanings, ceremonial practices, or philosophical worldviews. These dimensions continue to require historically informed literary scholarship grounded in Indigenous knowledge systems and contextual interpretation.

Within the present study, Artificial Intelligence therefore functions as a methodological collaborator rather than a cultural interpreter. Computational analysis facilitates the systematic organisation of ecological terminology, conceptual clustering, and comparative textual observation, while interpretative authority remains firmly situated within humanistic inquiry. This methodological distinction is especially important when engaging Indigenous literary traditions, whose meanings emerge through historical continuity, communal experience, oral transmission, and cultural practice that cannot be adequately represented through algorithmic correlation alone. Responsible AI-assisted humanities research consequently requires continuous dialogue between computational observation and culturally informed literary criticism.

The ethical significance of Indigenous ecological knowledge extends well beyond environmental conservation. Contemporary scholarship increasingly demonstrates that colonial governance and postcolonial developmental policies frequently marginalized community-based environmental practices by privileging centralized systems of resource management over Indigenous stewardship. As forests decline, communities simultaneously confront the erosion of languages, oral traditions, medicinal knowledge, ritual practices, and ecological philosophies accumulated across generations. Northeastern literature responds to these processes by preserving alternative environmental epistemologies rooted in reciprocity, restraint, and communal responsibility rather than extraction and commodification.

An equally significant aspect of this ecological philosophy concerns the cultural function of sacred landscapes. Rather than treating sacred groves merely as religious symbols, Gogoi, Kalita, and Satola demonstrate that these spaces operate as institutions regulating ecological behaviour through customary obligations, ritual observances, and communal responsibility (3377–78). Biodiversity conservation is consequently achieved through ethical participation rather than external enforcement, revealing that environmental sustainability and cultural continuity remain mutually constitutive. Sacred landscapes therefore preserve ecological resilience precisely because they are embedded within everyday social practices rather than isolated conservation programmes.

From the perspective of Dalit Phytohumanities, these literary representations collectively demonstrate that Indigenous ecological knowledge constitutes an alternative philosophy of environmental justice grounded in relational

coexistence instead of extractive development. Artificial Intelligence contributes to this inquiry by strengthening the organisation and comparison of ecological narratives across literary texts, while the interpretation of ethical meaning remains dependent upon critical engagement with Indigenous epistemologies, Environmental Humanities, and literary theory. Together, these approaches establish a robust interdisciplinary methodology through which Northeastern literature contributes not only to contemporary ecological criticism but also to emerging conversations concerning responsible AI-assisted humanities research and the future of more-than-human ethics.

Re-reading Northeastern Literature through Dalit Phytohumanities and Artificial Intelligence

The preceding discussions have demonstrated that Northeastern Indian literature consistently situates ecological relationships within broader questions of cultural continuity, historical memory, Indigenous epistemology, and environmental ethics. Yet much of the existing criticism continues to examine these dimensions through isolated theoretical perspectives, privileging either ecocriticism, postcolonial studies, Indigenous studies, or cultural nationalism independently. Such approaches have produced valuable insights but often overlook the complex interactions through which vegetal life simultaneously mediates ecological consciousness, social marginality, ethical responsibility, and cultural resilience. Dalit Phytohumanities addresses this interpretative limitation by providing an integrative critical framework capable of examining these interconnected processes without reducing ecological representation to a single theoretical category.

Kailash C. Baral argues that the literatures of Northeast India emerge from historically complex experiences of political marginalization, ethnic plurality, and cultural negotiation, requiring critical methodologies attentive to both regional specificity and wider structures of power (3–13). This observation is particularly significant because ecological representation within Northeastern literature cannot be detached from histories of territorial belonging, Indigenous sovereignty, migration, and community formation. Forests, rivers, mountains, and vegetal landscapes therefore constitute material environments through which communities negotiate collective identity, historical continuity, and cultural survival. Ecological space functions not merely as literary setting but as a constitutive dimension of social existence itself.

Dharmendra Baruah's analysis of Easterine Kire's *When the River Sleeps* further illustrates this convergence by demonstrating that the novel constructs a "figurative ecology" in which environmental imagery actively reshapes relationships between landscape, spirituality, and ethical consciousness (210–24). Forests do not simply surround human experience; they influence moral judgement, guide cultural memory, and participate in the formation of communal values. Such ecological participation challenges conventional literary distinctions between human agency and environmental background, allowing vegetal life to emerge as an active component of narrative meaning.

Comparable ecological dynamics characterize the writings of Mamang Dai. Gogoi, Kalita, and Satola demonstrate that Dai's literary landscapes preserve mythic knowledge, ancestral memory, and Indigenous ecological wisdom through "animated landscapes" in which historical processes and environmental continuity remain inseparable (3375–81). Forests thereby function simultaneously as ecological habitats, repositories of communal knowledge, and alternative archives resisting colonial and developmental epistemologies. Such representations reveal that ecological preservation is inseparable from the preservation of intellectual traditions, oral histories, and Indigenous systems of environmental understanding.

Subrata Barman similarly observes that contemporary Northeastern literature consistently questions extractivist models of modernity by foregrounding reciprocal relationships between communities and ecological environments (62–72). Rivers, forests, mountains, and plants acquire narrative agency because they actively participate in sustaining cultural identity rather than merely reflecting it. Environmental sustainability consequently emerges as an ethical prerequisite for cultural continuity, demonstrating that ecological degradation simultaneously threatens biodiversity, collective memory, and social cohesion.

The preservation of Indigenous ecological knowledge through literature is equally evident in Easterine Kire's narratives. Mero and Devi demonstrate that her novels safeguard Naga ecofolklore through representations of sacred landscapes, medicinal plants, ritual practices, and customary ecological knowledge (2682–89). Literary narration therefore becomes an act of cultural conservation through which endangered ecological philosophies continue to circulate across generations despite increasing environmental and social transformation. Such texts preserve ecological intelligence not by documenting information alone but by embedding environmental ethics within narrative imagination itself.

Within the interpretative framework of Dalit Phytohumanities, these literary interventions collectively demonstrate that vegetal life functions as a medium through which ecological justice, cultural resilience, and historical

continuity become mutually constitutive. Rather than representing nature as an external object available for symbolic interpretation, Northeastern literature repeatedly constructs ecological environments as relational spaces where ethical, political, and cultural processes unfold simultaneously. This perspective enables literary criticism to examine environmental representation through the interconnected categories of memory, marginality, Indigenous knowledge, and more-than-human coexistence without privileging one analytical dimension over another.

Artificial Intelligence contributes to this re-reading by strengthening methodological precision rather than altering theoretical orientation. AI-assisted textual analysis facilitates the identification of recurring ecological lexicons, conceptual relationships among vegetal entities, semantic proximity between environmental and cultural vocabularies, and patterns of narrative recurrence distributed across multiple literary texts. Such computational methods are particularly valuable when investigating interdisciplinary concepts that traverse Environmental Humanities, Plant Humanities, Indigenous Studies, and literary criticism. Nevertheless, these computational outputs remain descriptive rather than interpretative; they acquire scholarly significance only through critical engagement with literary theory, historical context, and philosophical reflection.

The methodological relationship between Artificial Intelligence and Dalit Phytohumanities may therefore be understood as one of critical augmentation. Artificial Intelligence organises textual evidence, supports comparative analysis, and visualises conceptual relationships, whereas Dalit Phytohumanities provides the interpretative framework through which those relationships acquire ethical, ecological, and cultural meaning. By maintaining this distinction, the present study avoids both technological determinism and methodological reductionism, ensuring that computational analysis remains subordinate to humanistic inquiry.

Collectively, the works of Mamang Dai, Easterine Kire, and other Northeastern writers demonstrate that ecological imagination constitutes an intellectual tradition through which communities negotiate justice, belonging, sustainability, and historical continuity. Their literary worlds refuse the separation of ecology from culture, memory from landscape, or environmental ethics from social responsibility. Through the combined perspectives of Dalit Phytohumanities and responsible Artificial Intelligence-assisted literary analysis, these narratives reveal that vegetal life is not merely represented within literature but actively structures literary engagements with identity, resilience, ecological justice, and Indigenous futures. Consequently, Northeastern Indian literature contributes not only to contemporary Environmental Humanities but also to emerging methodological conversations concerning interdisciplinary literary scholarship in the age of Artificial Intelligence.

3. Conclusion

The present study has argued that the ecological imagination of Northeastern Indian literature fundamentally reconfigures the relationship between literature, environment, and social justice by positioning plants, forests, rivers, and sacred landscapes as active participants in the production of cultural memory, Indigenous epistemology, and ethical coexistence. Rather than functioning as descriptive settings or aesthetic embellishments, vegetal environments emerge as dynamic sites through which communities negotiate historical continuity, ecological resilience, and collective identity. The literary works examined in this study demonstrate that environmental knowledge is inseparable from lived cultural practices, thereby expanding contemporary literary criticism beyond anthropocentric and purely symbolic interpretations of nature.

Drawing upon the philosophical insights of Michael Marder, the environmental justice framework of Rob Nixon, the ecological interventions of Indulata Prasad, and the vegetal orientation developed by Ritam Dutta, this article has demonstrated that ecological degradation and social marginalization are interconnected historical processes rather than independent analytical categories. Read together, these theoretical interventions establish that literary representations of vegetal life illuminate broader structures of inequality involving caste, indigeneity, environmental dispossession, and epistemic exclusion. Northeastern literature consequently contributes to Environmental Humanities by revealing that ecological crises are simultaneously cultural, ethical, historical, and political phenomena requiring interdisciplinary interpretation.

A principal contribution of this study lies in the formulation of Dalit Phytohumanities as an integrative interpretative framework capable of bringing Dalit Studies, Plant Humanities, Environmental Humanities, Indigenous literary criticism, and Artificial Intelligence-assisted humanities research into productive dialogue. Unlike earlier approaches that examine these fields separately, Dalit Phytohumanities demonstrates how vegetal life functions simultaneously as ecological presence, cultural archive, ethical interlocutor, and historical witness within literary discourse. This interdisciplinary framework broadens the analytical possibilities of environmental literary criticism by

foregrounding reciprocal relationships among ecological systems, marginalized communities, and Indigenous knowledge traditions while maintaining the centrality of close textual interpretation.

The incorporation of Artificial Intelligence represents an additional methodological contribution of this research. Throughout the study, AI has been positioned neither as an autonomous interpretative authority nor as a replacement for literary scholarship. Instead, Artificial Intelligence has functioned as a carefully regulated methodological instrument supporting semantic organisation, thematic mapping, comparative textual analysis, and conceptual synthesis across literary corpora. Such computational assistance strengthens the rigour of interdisciplinary research by facilitating systematic observation of ecological patterns while ensuring that philosophical interpretation, historical contextualization, and ethical evaluation remain the responsibility of human scholars. This balanced methodological position demonstrates how Digital Humanities may productively collaborate with Environmental Humanities without compromising the interpretative principles of literary criticism.

The literary works examined here further reveal that ecological sustainability cannot be separated from cultural continuity. Forests, sacred groves, medicinal plants, rivers, and other vegetal environments repeatedly appear as living institutions through which communities preserve ecological knowledge, oral traditions, ritual practices, and historical memory. These representations challenge extractivist models of development by advancing relational ethics founded upon reciprocity, restraint, and communal responsibility. Consequently, Northeastern literature offers an important intellectual resource for contemporary debates concerning sustainability, environmental justice, Indigenous rights, and more-than-human coexistence.

The interdisciplinary methodology developed in this article also opens significant directions for future research. Comparative investigations may extend Dalit Phytohumanities to Dalit, Adivasi, tribal, Indigenous, and other marginalized literary traditions across South Asia and beyond. Future studies may also combine AI-assisted corpus analysis with ethnographic research, ethnobotanical documentation, oral literature, multilingual digital archives, and computational environmental humanities to examine how ecological narratives circulate across diverse linguistic and cultural contexts. Such interdisciplinary collaborations have the potential to strengthen both literary scholarship and Digital Humanities while preserving the interpretative richness of humanistic inquiry.

Ultimately, this study contends that the future of Environmental Humanities depends not only upon expanding the geographical scope of ecological criticism but also upon embracing intellectually responsible methodological innovation. Dalit Phytohumanities, supported by ethically deployed Artificial Intelligence, demonstrates that computational technologies and literary interpretation need not exist in opposition. Instead, they can collaborate within a critically informed framework that respects cultural specificity, Indigenous epistemologies, and the interpretative complexity of literary texts. By integrating ecological philosophy, social justice, plant studies, and AI-assisted research into a coherent analytical model, this article contributes to emerging conversations concerning the future of literary scholarship in an era increasingly shaped by interdisciplinary knowledge production. In doing so, it positions Dalit Phytohumanities as a significant critical framework for understanding the reciprocal relationships among literature, ecology, technology, and justice in the twenty-first century.

References

1. Ambedkar, B. R. *Annihilation of Caste*. Edited by S. Anand, Navayana, 2014.
2. Baral, Kailash C., editor. *Narrating Northeast India: River, People and Places*. Routledge India, 2017.
3. Baruah, Dharmendra. "Figurative Ecologies in Northeast India: Reading Easterine Kire's *When the River Sleeps*." *Revista Interdisciplinar de Literatura e Meio Ambiente (RILE/JILE)*, vol. 9, no. 1, 2022, pp. 210–224.
4. Bhattacharyya, Pronami. "Ecology of the 'Other': A Posthumanist Study of Easterine Kire's *When the River Sleeps* (2014)." *Humanities*, vol. 13, no. 1, 2024, article 19.
5. Boden, Margaret A. *AI: Its Nature and Future*. Oxford UP, 2016.
6. Brier, Søren. "The Paradigm of Complexity." *World Futures*, vol. 66, nos. 7–8, 2010, pp. 475–501.
7. Dai, Mamang. *The Black Hill*. Aleph Book Company, 2014.
8. ---. *The Legends of Pensam*. Penguin Books India, 2006.
9. ---. *River Poems*. Heritage Publishing House, 2004.
10. Dutta, Ritam. "Dalit Botanics: Vegetal Pedagogies, Dalit Vegetal Poetics and Forest Agency in the Short Stories of Shyamal Kumar Pramanik." *Australian Journal of Environmental Education*, vol. 42, Special Issue 1, 2026, pp. 182–193.
11. Gogoi, Pankaj, Popi Kalita, and Dipankar Satola. "Animating the Sacred: Mythic Ecologies and Indigenous Cosmology in Mamang Dai's *The Legends of Pensam*, *River Poems*, and *The Black Hill*." *International Journal of Environmental Sciences*, vol. 11, no. 18 (Special Issue), 2025, pp. 3375–3389.
12. Guru, Gopal. *Humiliation: Claims and Context*. Oxford UP, 2009.
13. Hall, Matthew. *Plants as Persons: A Philosophical Botany*. State University of New York Press, 2011.

14. Hazarika, Kalyani. "Ecological Memory and Indigenous Consciousness in Mamang Dai's *The Legends of Pensam*."
15. Kire, Easterine. *When the River Sleeps*. Zubaan, 2014.
16. Kishor, Neena. "Ecocritical Reading of Easterine Kire's *When the River Sleeps*." *International Journal of English Language, Literature in Humanities*, vol. 7, no. 9, 2019, pp. 130–133.
17. Manovich, Lev. *Cultural Analytics*. MIT Press, 2020.
18. Marder, Michael. *Plant-Thinking: A Philosophy of Vegetal Life*. Columbia UP, 2013.
19. Mero, Wedeu, and Thokchom Sunanda Devi. "Ecofolklore and Indigenous Wisdom in Easterine Kire's Novels." *Journal of Namibian Studies*, vol. 42, 2024, pp. 2682–2689.
20. Nealon, Jeffrey T. *Plant Theory: Biopower and Vegetable Life*. Stanford UP, 2016.
21. Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. Harvard UP, 2011.
22. Omvedt, Gail. *Dalits and the Democratic Revolution: Dr. Ambedkar and the Dalit Movement in Colonial India*. Sage, 1994.
23. Prasad, Indulata. "Towards Dalit Ecologies." *Environment and Society: Advances in Research*, vol. 13, no. 1, 2022, pp. 98–120.
24. Rege, Sharmila. *Writing Caste/Writing Gender: Narrating Dalit Women's Testimonios*. Zubaan, 2006.
25. Ryan, John C. *Plants in Contemporary Poetry: Ecocriticism and the Botanical Imagination*. Routledge, 2018.
26. Sinclair, Stéfan, and Geoffrey Rockwell. *Hermeneutica: Computer-Assisted Interpretation in the Humanities*. MIT Press, 2016.
27. Underwood, Ted. *Distant Horizons: Digital Evidence and Literary Change*. University of Chicago Press, 2019.