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Literary Narrative and Ecological Crisis: Ecocritical Perspectives on Amitav Ghosh's Selected Writings

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ABSTRACT: This study analyzes Amitav Ghosh's fiction through the lens of ecocriticism (in terms of how his writing addresses climate change and environmental degradation). Drawing on *The Hungry Tide* (2004), *The Great Derangement: Climate Change and the Unthinkable* (2016), and the Ibis Trilogy (2008–2015), it examines how Ghosh instills an ecological consciousness into his narrative strategies and unsettles conventional anthropocentric perception. The paper situates his work within postcolonial environmentalism, and multispecies entanglement. It argues that Ghosh projects a postcolonial ecocritical vision using unstable geography, nonhuman agency, and historical ecology. Moreover, this vision reshapes how readers imagine the environment. The paper contributes to ongoing conversations in the environmental humanities regarding how literature can help mitigate environmental crisis.

1. INTRODUCTION

Literature and ecology have become closely entangled in recent literary studies. As the planet moves through ecological crises, such as species extinction, ocean acidification, and global warming, ecocriticism has become one of the critical scholarly tools. It helps analyze how environmental narratives shape, and reflect the relationship between the human and the nonhuman world (Glotfelty and Fromm). Amitav Ghosh occupies a distinctive place in this interdisciplinary (literary) domain. Across the mangrove channels of the Sundarbans and the opium-laced ocean routes of nineteenth-century Asia, his fiction has kept focusing on ecological ethics amidst dense historical and postcolonial plots. He reflects this concern explicitly in *The Great Derangement: Climate Change and the Unthinkable* (2016), a sustained argument that contemporary fiction has largely failed to represent (Ghosh, *The Great Derangement*). Read against his earlier novels, such as *The Hungry Tide* (2004) and the Ibis Trilogy (made up of *Sea of Poppies* (2008), *River of Smoke* (2011), and *Flood of Fire* (2015)), that argument is strengthened through dense ecological materials, packed inside his postcolonial (historical) novels (Ghosh, *The Hungry Tide*; Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). Taken together, the five texts extend the ecocritical engagement to Rob Nixon's "slow violence"; the gradual, largely invisible environmental harm that affects the living communities immensely (Nixon).

This paper argues that Ghosh's writing offers a postcolonial ecocritical perspective bound up with imperial history, capitalist extraction, and social inequality. His approach criticizes not only anthropocentric thinking, but also Eurocentric assumptions that have shaped mainstream environmentalism to a large extent. In that sense, his fiction resonates with Ursula Heise's "eco-cosmopolitanism", an environmental imagination that transcends spatiotemporal constraints (Heise). This study relies on ecocriticism as a framework, with particular attention to postcolonial and non-Western scholarships. *The Hungry Tide* is a

testament of Ghosh's eco-realism, in which the Sundarbans is portrayed as a landscape of entangled species and contested environmental politics. Similarly, *The Great Derangement* demonstrates Ghosh's imaginative prose based on climate crisis and the Ibis Trilogy acts as an eco-historical account of colonialism, capitalism, and environmental degradations. The study aims to contribute to environmental humanities scholarship and to shape readers' perceptions on ecological futures.

2. LITERATURE REVIEW

2.1 Postcolonial Ecocriticism and Environmental Justice

Ecocriticism became a distinct field of literary study in the 1990s, particularly through Lawrence Buell's *The Environmental Imagination* and Cheryll Glotfelty and Harold Fromm's *The Ecocriticism Reader* (Buell, *Environmental Imagination*; Buell, *Future of Environmental Criticism*; Glotfelty and Fromm). Then, it widened to include environmental injustice, globalization, colonialism, and the unequal distribution of ecological harm. Postcolonial ecocriticism in particular argues that environmental degradation cannot be separated from histories of empire, economic extraction, and social marginalization (DeLoughrey and Handley; Huggan and Tiffin). Ghosh's fiction tries to link ecological crisis to colonial history, marginalized communities, and indigenous environmental knowledge. In his novels, environment never acts as a backdrop; rather is actively shaped by power dynamics and historical inequality.

The Hungry Tide makes this link especially visible (Ghosh). Set in the volatile landscape of the Sundarbans, the novel exposes the limits of a purely scientific approach to ecology. Here, Piya's scientific knowledge is supplemented by Fokir's (a local fisherman) indigenous environmental knowledge. The novel's treatment of the Morichjhapi episode links ecological politics directly to forced displacement, caste, poverty, and state power. The clash between conservation policy and the settlement of refugees shows how environmental protection can itself become a form of exclusion and source of exploitation. It broadly echoes Ramachandra Guha's critique of conservation schemes that ignore marginalized communities (Guha 71-83; Guha and Martínez-Alier). Moreover, it depicts Rob Nixon's "slow violence" by literally magnifying invisible ecological harm. Ghosh's ecological imagination therefore extends postcolonial ecocriticism by insisting that environmental justice cannot be separated from the plights of indigenous communities. The Sundarbans in his novel illustrates a dynamic interplay of ecological conservation and human development, where both turn out to be embedded in the same contested power structures.

2.2 Multispecies Agency and Materiality

Alongside these postcolonial concerns, Ghosh's fiction pays close attention to the material relationships, which ties humans to the more-than-human world. Stacy Alaimo's concept of "trans-corporeality" is useful here, since it treats human bodies as materially continuous with other organisms, substances, and environments (Alaimo). Donna Haraway's emphasis on multispecies entanglement and Val Plumwood's critique of human-centered dualism oppose the idea that humans stand apart from the nonhuman world (Haraway; Plumwood). Where Nixon foregrounds the unequal (political) distribution of environmental harm, Alaimo tracks the material movement of environmental forces through living bodies, and multispecies entanglement. Such approaches help redistribute agency across human and nonhuman actors more broadly.

The Hungry Tide is the perfect literary landscape to watch these perspectives converge. The Sundarbans appears not as a static setting, but as a dynamic assemblage of tides, rivers, mangroves, animals, and weather that shapes human experience pro-actively. Piya's scientific approach initially seeks to categorize the nonhuman world; where as Fokir's embodied knowledge of the tide country offers a different mode of ecological engagement. The same perspective runs through the Ibis Trilogy, where plants, farmland, oceans, ships, commodities, and animals; all become part of the material networks (through which, colonial power operates) (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). It also echoes posthumanist arguments against human exceptionalism (Alaimo; Haraway; Morton).

2.3 Blue Humanities and Fluid Space

Ghosh's preoccupation with water, maritime movement, and unstable ecological boundaries connects naturally to the Blue Humanities through oceans, rivers, and coastal areas. In *The Hungry Tide*, the Sundarbans exists only through the constant interaction of land, river, sea, and tide. Ghosh presents the tide country as a place continually reshaped by water. Tides submerge and reveal islands, reroute channels, and reshape the coastline, pushing the limit of human and nonhuman lives to the edge (Ghosh, *The Hungry Tide*). This fluidity also actively shapes the novel's form, turning the ecological setting into an active narrative force. Thus, it resonates with Yi-Fu Tuan's account of place as something dynamic (rather than fixed), and Gary Snyder's sense of bioregional belonging (Snyder; Tuan).

The Ibis Trilogy pushes this aquatic orientation further, since the Indian Ocean becomes a major channel of colonial circulation. Ships move (transport) people, commodities, plants, languages, and cultural practices across geographical boundaries. It turns the ocean into a site, where ecology, economics, and empire meet (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). Hence, the sea becomes a medium, through which colonial capitalism reorganizes human and nonhuman relations.

2.4 Climate Fiction and Narrative Form

The question of ecological representation becomes explicit in *The Great Derangement* (2016). Ghosh argues that contemporary literary culture has struggled to represent climate changes, because the scale, unpredictability, and collective character of ecological crisis transcend the limit of conventional narrative approaches. This connects with Dipesh Chakrabarty's account of the Anthropocene, where he claims that climate change collapses the distinction between human history and geological history (Chakrabarty 205). Thus, ecological crisis calls for a different narrative sense of time and space. Taylor points to the limits of conventional climate discourse and identify alternative strategies, through which climate changes become narratable (Taylor).

The Hungry Tide employs shifting perspectives, unstable space, and multispecies encounter to unsettle any firm boundary between human and nonhuman agency (Ghosh). The Ibis Trilogy stretches ecological narration beyond the historical and geographical networks of colonial capitalism. *Sea of Poppies* follows the transformation of farmland through the opium economy, *River of Smoke* extends this into botanical circulation and maritime commerce. Similarly, *Flood of Fire* brings in the technological and military changes of imperial expansion. Ghosh's fiction can therefore be read as a practical answer to the problems posed in *The Great Derangement*. The nonfiction diagnoses the difficulty of representing planetary crisis within conventional literary form, whereas his fictional novels try out alternatives, built on fluid space, multispecies agency, historical scale, and multiple languages and timeframes. This relationship between diagnosis and remedial practice is the core of the present study. It basically demonstrates how ecological themes in Ghosh's fiction reorganize narrative space, time, agency, and historical consciousness to make ecological crisis perceptible at all.

2.5 Research Gap

Existing scholarship has already mapped the ecological, postcolonial, and environmental-justice dimensions of Ghosh's fiction, but much of it stays limited to single texts or single concepts (such as coastal ecology, environmental injustice, the blue humanities, colonial extraction). What has drawn less attention is how Ghosh's fiction itself answers the representational crisis, diagnosed in *The Great Derangement*. This study aims to bridge that gap, arguing that *The Hungry Tide* and the Ibis Trilogy don't merely illustrate ecological themes; rather they reshape historical narrative through fluid space, multispecies agency, and non-linear time frames. Here, *The Great Derangement* (non-fiction) is treated as a touchstone to test Ghosh's fiction.

3. RESEARCH QUESTIONS

1. How does Ghosh's fiction turn ecological instability into narrative form, rather than simply representing environmental degradation as subject matter?
2. How do tidal, oceanic, and imperial spaces reorganize the relationship between human and nonhuman agency in *The Hungry Tide* and the Ibis Trilogy?
3. How do Ghosh's fictional strategies articulate the critique of literary realism, made in *The Great Derangement*?

4. METHODOLOGY

This is a qualitative, interpretive study built on close textual analysis. It is supported by postcolonial ecocriticism and various theories of the environmental humanities. The corpus consists of *The Hungry Tide*, *Sea of Poppies*, *River of Smoke*, *Flood of Fire*, and *The Great Derangement*. This allows a close examination of ecological crisis, colonial history, environmental knowledge, and literary form across different temporal and geographical scales.

The Hungry Tide offers a sustained engagement with the tidal ecology of the Sundarbans, multispecies relationships, competing forms of environmental knowledge, conservation politics, and the displacement of marginalized communities, especially through the Morichjhapi episode (Ghosh, 2004). The Ibis Trilogy connects colonial commodity circulation with ecological extraction, agricultural transformation, oceanic mobility, botanical transplantation, and the infrastructure of imperial capitalism

(Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). *The Great Derangement* acts as a meta-critical text, which illustrates Ghosh's explicit reflection on climate change, literary representation, realism, and the limits of contemporary imaginative culture. The study examines how his theoretical diagnosis relates to his own fictional strategies.

The analysis proceeds through close reading of passages, where ecological processes become significant to characterization, narrative development, spatial construction, and historical representation. These are treated as thematic narrative devices rather than isolated motifs. Special attention is given to water and tides, animals, plants, dynamic weather, ecological disaster, colonial commodities, spatial instability, multilingual speech, distribution of agency, myth and oral tradition, temporal shifts, and narrative focalization. This helps identify recurring patterns and significant differences among *The Hungry Tide*, the Ibis Trilogy, and *The Great Derangement*.

5. THEORETICAL FRAMEWORK: FROM POSTCOLONIAL ECOCRITICISM TO ECOLOGICAL NARRATIVE

Ghosh's fiction never treats environmental crisis apart from colonialism, capitalism, displacement, and unequal access to ecological resources. This study brings together interconnected concepts (slow violence, trans-corporeality, planetary or longue durée time, and blue/postcolonial ecological space), rather than applying them separately.

5.1 Slow violence

Nixon defines environmental violence as gradual, dispersed, and often hard to perceive within conventional representations of violence. It disproportionately affects populations, which are vulnerable politically and culturally. This is especially relevant to postcolonial ecological analysis, since environmental damage often develops through longer histories of colonial extraction, displacement, and unequal access to land. In *The Hungry Tide*, the ecological vulnerability of the Sundarbans intersects with the displacement of marginalized communities and the politics of conservation. Similarly, in the Ibis Trilogy, colonial commodity production and the transformation of agriculture under the opium economy accumulate ecological and social consequences over time (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*).

5.2 Trans-corporeality and multispecies materiality

Alaimo's concept challenges the conventional idea of treating the human body as a self-contained entity separate from nature. It believes that bodies are continuously exposed to and materially connected with water, soil, animals, plants, and weather (Alaimo). This is especially productive for *The Hungry Tide*, where human existence is repeatedly conditioned by tides, rivers, mangroves, and other ecological processes (Ghosh). The relationship between Piya's scientific knowledge and Fokir's indigenous knowledge shows that ecological understanding is not produced only through abstract observation, but also through embodied interaction with a particular environment. It also identifies the material entanglements, through which ecological processes are experienced.

5.3 Planetary and longue durée time

Chakrabarty's account of the Anthropocene argues that climate change complicates conventional historical frameworks, because athropogenic actions often operate on geological as well as historical scales. Ghosh's fiction repeatedly connects immediate human experience with much longer histories of colonialism, capitalism, and planetary change (Chakrabarty 197-222; Ghosh). The Ibis Trilogy's narrative of agricultural transformation, commodity circulation, and imperial expansion provides a historical background, against which contemporary ecological concerns can be reconsidered (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*), and *The Hungry Tide* connects the contemporary Sundarbans to earlier histories of settlement, migration, and political violence (Ghosh). Actually, Ghosh's concern with the limits of contemporary literary culture (to represent climate change) is a problem of scale, because ecological crises frequently exceed the spatio-temporal boundaries of individual lives and conventional narrative.

5.4 Blue and postcolonial ecological space

Drawing on postcolonial ecocriticism and the Blue Humanities, this dimension treats water as a dynamic agency (DeLoughrey & Handley; Heise). In *The Hungry Tide*, the tidal landscape continually alters the relationship among land, sea, and human settlement. Similarly, in the Ibis Trilogy, the ocean becomes a medium, through which people, commodities, plants, languages, and imperial power circulate (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). In this study, Blue ecological space refers not simply to water as an environmental resource, but as a catalyst to relate ecology, mobility, commerce,

colonialism, and cultural knowledge. Colonialism reorganizes ecological space through extraction, commodity circulation, and displacement (Huggan & Tiffin; DeLoughrey & Handley).

Together, these concepts allow the study to move beyond cataloguing ecological themes and toward examining how ecological relations shape narrative space, temporality, characterization, focalization, and the distribution of human and nonhuman agency. Thus, reading *The Hungry Tide* and the Ibis Trilogy alongside *The Great Derangement* offers a theoretical inquiry into ecological crisis and provides an alternate narrative approach.

6. *THE HUNGRY TIDE*: TIDAL SPACE, MULTISPECIES AGENCY AND ENVIRONMENTAL JUSTICE

The Hungry Tide (2004) examines ecological instability, multispecies agency, environmental knowledge, and social justice together. Set in the Sundarbans, the novel places human communities inside a tidal environment, where land, water, animals, weather, and settlement stay in continuous interaction. Here, tides determine movement, waterways disrupt fixed geography, animals shape human behavior, and ecological disaster exposes the unequal vulnerability of different communities.

6.1 Fluid space and tidal temporality

The Sundarbans cannot be treated as a fixed territory. Here, tides, currents, erosion, and sedimentation constantly alter its boundaries. Ghosh describes it as a place with "no borders here to divide fresh water from salt, river from sea" (Ghosh, *The Hungry Tide* 10). This dismantles the rigidity of geographical space. Such instability extends into how characters move through the novel. During Piya and Fokir's search for dolphins, their GPS records more than nine miles of travel along a route that resembles on the display as "a strand of wool that had come unraveled from an old scarf" (276). It sets scientific mapping against ecological mobility. Fokir does not navigate by a fixed map. His movement is catalyzed by embodied familiarity with currents and the behavior of dolphins. Thus, water in the novel is depicted as a force that reorganizes routes, settlements, and relationships.

6.2 Piya and Fokir: scientific and experiential knowledge

Piya approaches the Sundarbans as a scientist studying the Irrawaddy dolphin. On the other hand, Fokir knows the tidal waterways through lived experience. In one episode, Fokir is confident the dolphins will appear from a particular creek. But, when they fail to appear, he revises his assumptions and navigates through narrower channels. Neither character has complete mastery of the environment. Read through Alaimo's trans-corporeality, Piya's knowledge is not produced from outside the environment. When her body becomes increasingly exposed to heat, water, and mud (as she navigates the delta), and her scientific observation turns into embodied knowledge (Alaimo). Ghosh thus moves beyond the binary opposition between modern science and indigenous knowledge. It resonates with Kyle Whyte's emphasis on Indigenous and situated forms of environmental knowledge (Whyte 235).

6.3 The dolphin and nonhuman agency

The Irrawaddy dolphin unsettles the boundary between object of scientific observation and participant in narrative action. In the chapter "Snell's Window," Ghosh explains how the Gangetic dolphin experiences an underwater world, where silt obstructs visibility. He opines, "top and bottom and up and down become very quickly confused" (*The Hungry Tide* 47). Such description briefly shifts narrative perspective toward the sensory conditions of another species. This becomes especially significant, when Piya herself falls into the water and experiences the same disorientation (surrounded by mud and unable to distinguish direction). The environment she had studied from a distance is suddenly experienced through her own body, which is the finest example of trans-corporeality.

6.4 The tiger, Bon Bibi, and multispecies coexistence

The Royal Bengal tiger offers a different kind of nonhuman agency. Unlike the dolphin, which draws scientific and conservation interest, the tiger is simultaneously protected and feared. Being an endangered species, it deserves protection. But, it also acts as an immediate threat to people, whose livelihoods depend on the forest. Ghosh's treatment of the Bon Bibi tradition is an integral part of his ecological narrative, through which local communities negotiate coexistence with the tiger and other dangers of the forest. It showcases that human survival depends on negotiating nonhuman forces that cannot be fully controlled. This tension becomes explicit in the Morichjhapi episode.

6.5 Morichjhapi: conservation, displacement, and slow violence

The Morichjhapi episode gives the strongest connection between environmental justice and slow violence. Ghosh reconstructs the 1979 displacement of refugees from Morichjhapi, where state conservation policy became entangled with the exclusion and violent removal of a marginalized community. The refugees' relationship to the land is remembered through a simple statement: "They just wanted a little land to settle on" (*The Hungry Tide* 96). Here, the refugees' demand is portrayed as a basic material need, but the state's conservation framework turns their settlement into an environmental problem. It exposes the political assumptions associated with the geographical category of "protected forest." Read through Nixon's slow violence, the harm at Morichjhapi is not only the spectacular violence of eviction; it is embedded in longer processes of displacement, poverty, and political exclusion. Ghosh further sharpens the issue by juxtaposing the state's protection of the tiger with the exposure of people to tigers, tidal floods, cyclones, and crop failure. Such description is not an anti-conservation narrative, but a challenge to any model that treats nonhuman preservation and human justice as mutually exclusive.

6.6 Ecological space, memory, and narrative form

The Morichjhapi story also connects ecological space with memory and form. Nirmal's uncertainty about how to represent the place becomes self-reflexive; "would they flow, as the rivers did, or would they follow rhythms, as did the tides?" (*The Hungry Tide* 175). It connects ecological space directly to narrative form. Read alongside *The Great Derangement*, this passage anticipates Ghosh's later question about whether conventional literary form can represent ecological crisis. Thus, the novel does not simply illustrate his environmental ideas, but enacts a formal problem of representation.

The novel's uniqueness is shaped by the argument; ecological instability is represented not only through the concerned subject, but also through the organization of narrative space, knowledge, perception, and agency. The tidal landscape destabilizes fixed geography; Piya and Fokir expose the incompleteness of any single ecological epistemology; the dolphin challenges anthropocentric perception; the tiger complicates conservation; and Morichjhapi shows how environmental governance can reproduce social inequality. These map directly onto the study's framework, which suggests that ecological crisis becomes narratively perceptible, only when the environment is allowed to participate in the production of meaning.

7. *THE GREAT DERANGEMENT*: THE CRISIS OF LITERARY IMAGINATION

The Great Derangement is Ghosh's most explicit reflection on the relationship between climate change and literary representation. Where *The Hungry Tide* and the Ibis Trilogy explore ecological relations through fiction, this book directly exposes the limitations of dominant literary conventions (in terms of representing planetary ecological crisis). It questions whether their inherited assumptions about realism, probability, and human agency are adequate to this age of climate instability.

7.1 Realism and the problem of representation

Ghosh argues that contemporary literary culture struggles with events, whose scale and unpredictability exceed the conventions of traditional realism. He describes such climate events as "too powerful, too grotesque, too dangerous, and too accusatory" to fit comfortably within conventional literary treatments of Nature (Ghosh, *The Great Derangement* 30). Climate changes challenge literature not by exceeding its limit, but by unsettling the previous standards of narrative realism. For example, in *The Hungry Tide*, the cyclones and storms are not mere dramatic backgrounds; rather they dynamically alter the relationships among characters, environment, and mortality. Ghosh later reflects the difficulty of writing such scenes in *The Great Derangement*. Here, the storm kills one of the novel's principal characters, which shows that *The Great Derangement* theorizes a problem (which has already been narratively enacted by *The Hungry Tide*).

7.2 Improbability and the unthinkable

Conventional realism depends on ordinary events, which are plausible to readers. But, according to Ghosh, contemporary weather possesses a "radically nonhuman nature", catalyzed by "cumulative human actions" (*The Great Derangement* 30). This collapses the conventional opposition between nature and culture. A cyclone, flood, or drought may look like a natural event, but its intensity can be greatly shaped by anthropogenic activities. So, it is quite difficult to classify them through ordinary narrative categories. Thus, Climate events acquire such an unstable position between human agency and nonhuman force that the environment functioning acts as mere consequence.

7.3 Nonhuman agency and the collapse of human exceptionalism

Ghosh's representational problem directly challenges anthropocentrism. "Nonhuman agencies have dispelled" the illusion of human uniqueness (*The Great Derangement* 31). So, literature must find "other ways" to imagine the beings and events of the contemporary ecological era (31). If nonhuman forces can alter human lives and social structures, narratives centered exclusively on anthropocentrism become inadequate. This connects directly to *The Hungry Tide*, where the dolphin, tiger, tides, and storm repeatedly shape the human experiences (especially of Piya, Fokir, or Kanai).

7.4 History, politics, and the colonial roots of ecological crisis

Ghosh's critique of literary imagination is inseparable from his understanding of history and politics. Climate change is embedded in histories of imperialism, capitalism, resource extraction, and uneven (political) power dynamics. It is explicitly demonstrated in Ghosh's own fiction, through the Ibis Trilogy's account of the opium economy and imperial maritime circulation (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). The climate crisis is therefore a problem of historical memory and political responsibility. It reinforces the study's approach of planetary/longue durée time and explains why Ghosh's historical fiction matters: it can reconstruct some of the material and political histories that contemporary climate discourse risks losing.

7.5 From *The Great Derangement* to Ghosh's fiction

The significance of *The Great Derangement* for this study lies in the tension between Ghosh's critique of literary realism and his own fictional practice. *The Hungry Tide* answers through tidal spatiality, multispecies agency, ecological uncertainty, and the incorporation of catastrophe into human relationships. The Ibis Trilogy answers on a larger historical scale, connecting agricultural transformation, opium production, botanical circulation, maritime mobility, steam technology, and imperial capitalism (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). Together, the fiction expands ecological representation across spatial, temporal, material, and historical scales.

8. IBIS TRILOGY: IMPERIAL ECOLOGY AND OCEANIC CIRCULATION

The Ibis Trilogy extends Ghosh's ecological imagination from the contemporary Sundarbans into the nineteenth-century history of colonial capitalism. It shows that ecological transformation cannot be separated from imperial commodity circulation, agricultural restructuring, botanical mobility, maritime networks, and emerging fossil-fuel technology. Read as a whole, the trilogy provides a longue durée account of ecological change embedded in the historical development of global capitalism. It juxtaposes with Ghosh's own argument that ecological crisis has to be understood through its historical and political origins (Ghosh) and resonating with Chakrabarty's claim that human history must increasingly be understood alongside planetary ecological process (Chakrabarty 205).

8.1 *Sea of Poppies*: monoculture and slow violence

The novel's ecological significance begins with its account of farmland transformed by the colonial opium economy. Ghosh traces opium's effects on agricultural practice, food production, household economy, and the relationship between cultivators and land (which also connects to Jason W. Moore's account of capitalism as an ecological regime) (Moore). Deeti's memory of a period, when poppies were grown only "in small clusters between the fields" of wheat, lentils, and vegetables establishes a clear contrast with colonial monoculture (Ghosh, *Sea of Poppies* 28). once "a few clumps of poppy were enough to provide for a household's needs" (29). Then, poppy shifts from a supplementary crop to the dominant one. she recalls colonial authorities "forcing everyone to grow poppy", which eventually displaced even the straw needed to repair household roofs (29). Read through Nixon's slow violence, the harm of the opium economy does not arrive at once, but accumulates through gradual changes in cropping patterns, altered food crops, and rising labor demands. The ecological dimension deepens in Ghosh's description of poppy sap trapping insects that merge with the harvested gum. This makes the poppy part of a larger multispecies system, in which slow violence and trans-corporeality intersect (Alaimo; Nixon). This transformation ultimately connects to the ocean. Ghosh contrasts local production with the colonial factory system, where opium is processed and "sent across the sea in boats" (29). This is a movement from field to factory, from ship to overseas market that folds land and ocean into the same imperial ecological network.

8.2 *River of Smoke*: botanical imperialism

Where *Sea of Poppies* foregrounds agricultural transformation, *River of Smoke* widens the trilogy's ecological scope to the mobility of plants across imperial and oceanic networks. The Redruth carries an extraordinary collection of plants in Wardian cases. Its decks filled with plants, whose transport is made possible by the newly developed technology of miniature greenhouses (Ghosh, *River of Smoke*). Thus, it presents a floating botanical infrastructure that turns the plant from a rooted organism into a mobile imperial object. It simultaneously contains living organisms, scientific specimens, commercial objects, and imperial resources. The ship maintains its own ecosystem, where rainwater is collected, shade and sunlight are regulated, and organic waste is separated for use as plant nutrition. Thus, rain helps in plant nourishment and food waste becomes fertilizer. It represents imperial mobility as a material circulation among humans, plants, water, waste, and technology (Alaimo). The collection also has an explicit economic dimension, where the plants are described as potentially extraordinarily valuable resources. The phrase "botanical Babel" illustrates a garden of species from different continents growing together; an artificial ecological assemblage that complicates the distinction between natural and artificial (Ghosh, *River of Smoke* 40). Colonialism, in other words, reorganizes the geographical distribution of living matter as much as it extracts minerals or commodities. The novel makes this vivid through Ah Fey's attempt of protecting his plant during storms at sea. It represents a striking reversal, in which the human body becomes vulnerable during service of transporting plants. It also presents imperial ecology as a network of interdependent human and nonhuman actors.

8.3 *Flood of Fire*: steam, coal, and empire

Flood of Fire extends the trilogy's ecological history to the emerging carbon economy, representing steam-powered ships, coal, railways, and industrial infrastructure within nineteenth-century imperial expansion. The steamer Enterprize's appearance on the Hooghly sets off a technological race among shipowners. Steam-tugs move through the river "exhaling long trails of smoke, soot and cinders" (Ghosh, *Flood of Fire* 227). This bridges the fictional narrative and Ghosh's later environmental argument directly, making fossil energy materially visible rather than an abstract economic system. The historical figure of Dwarkanath Tagore, whom Ghosh identifies as significant to India's carbon economy (through steam transportation, railways, and the Raniganj coalfields), keeps the trilogy from reducing that economy to a simple opposition between British colonizers and passive Indian subjects. Sailing ships depend on wind; but, the Enterprize could move "without a breath of wind stirring" (*Flood of Fire* 227). It connects directly to Chakrabarty's planetary history, since geological materials accumulated over immense stretches of time become the energy source for rapidly expanding human economies (Chakrabarty 218). Ghosh links the development of the carbon economy to imperialism and unequal global development. He argues that the wealth it generated is inseparable from poverty and global justice. steam does not simply represent technological progress, but a transformation in the material relationship between humans, geological resources, oceans, and political power.

8.4 From monoculture to fossil energy

Read together, the three novels trace a progressive expansion of ecological scale. From agricultural land to poppy (colonial commodity) monoculture; from plants to botanical transplantation (oceanic circulation); from steam to coal (fossil-fuel infrastructure); everything keeps the trilogy from being read simply as a historical narrative about the opium trade. *Sea of Poppies* foregrounds slow violence, *River of Smoke* foregrounds trans-corporeal materiality, and *Flood of Fire* foregrounds planetary/longue durée time. But, in all three novels, the ocean functions as a blue/postcolonial ecological space, through which commodities, people, plants, technology, and imperial power circulate. The trilogy therefore critiques the narrow understanding of climate fiction as literature, concerned with mere catastrophes. Its significance lies precisely in its orientation toward the historical past, which places ecological crisis within the longue durée of colonial and capitalist history.

9. BEYOND THE DERANGEMENT: GHOSH'S ECOLOGICAL NARRATIVE FORM

Ghosh's ecological intervention illustrates how ecological realities can be narrated. *The Great Derangement* argues that climate change exposes the limits of literary forms built around individual human experience, predictable events, stable geography, and conventional realism (Ghosh, *The Great Derangement*). Ghosh's fiction demonstrates an alternative practice, in which space turns fluid, time becomes layered, multiple languages coexist, and agency is distributed across human and nonhuman actors.

9.1 Spatiality

In *The Hungry Tide*, geographical space is continually produced and transformed by tides, rivers, storms, and human movement. This makes space an ecological agent. In the storm, when the river surface rises into a "sloping ramp" and Fokir steers the

boat over mangrove roots into the interior of the island (Ghosh, *The Hungry Tide* 305). This connects to DeLoughrey and Handley's postcolonial ecocritical emphasis on place and mobility, and to blue-humanities approaches that treat water as a material environment rather than empty space between territories. The Ibis Trilogy expands this spatial model from the Sundarbans to the Indian Ocean. The Redruth becomes a mobile ecological space, which functions simultaneously as vessel, botanical laboratory, commercial infrastructure, and ecological microcosm (Ghosh, *River of Smoke*). Thus, Ghosh's spatial imagination moves from territorial space to relational space, in which river, island, ocean, ship, and port are interconnected nodes within larger ecological and imperial networks.

9.2 Temporality

Rather than locating ecological crisis only in future catastrophe, Ghosh's fiction repeatedly moves backward into colonial history. He remains consistent with his argument that the Anthropocene encompasses the "recent past" and "the present", not only the future (Ghosh, *The Great Derangement* 60). The Ibis Trilogy exemplifies this, locating agricultural transformation, botanical circulation, and the carbon economy within the historical development of colonial capitalism (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). This intersects closely with Chakrabarty's "climate of history," which argues that the Anthropocene requires rethinking the relationship between human history and geological time (Chakrabarty 205). Ghosh's fiction consequently operates across several temporal scales at once (such as individual time, historical time, ecological time, and planetary time). This approach lets him connect apparently distant historical events to contemporary ecological conditions.

9.3 Multilingualism

Ghosh's novels bring together multiple languages, dialects, registers, and nautical vocabularies, which reflects the plurality of ecological and cultural knowledge. This is especially significant in the Ibis Trilogy, where the movement of people across the Indian Ocean produces linguistic encounters among Indians, Chinese, Europeans, lascars, and colonial officials. In this way, it turns language into a record of mobility and cultural contact. It also challenges the idea that ecological knowledge must be expressed through a single standardized scientific vocabulary. In *The Hungry Tide*, Piya's knowledge is mediated through scientific terminology, while Fokir communicates through gesture and intimate familiarity with the environment. Such representation raises the question that whose environmental knowledge should become institutionally legitimate (DeLoughrey and Handley; Huggan and Tiffin). The coexistence of languages mirrors the coexistence of different ways of knowing the environment, which produces an ecology of voices rather than letting one system dominate.

9.4 Distributed agency

Ghosh's narrative form challenges the usual organization of narrative around a single autonomous human protagonist. It distributes agency across humans, animals, plants, water, weather, technology, and material objects. In *The Hungry Tide*, dolphins, tigers, tides, storms, mangroves, and rivers significantly influence human decisions. A storm sequence shows Fokir anchoring the boat to the forest with a web of rope, while the wind threatens to turn the equipment into dangerous projectiles. It produces a network of agency rather than a simple human-versus-nature opposition. The same pattern appears in *River of Smoke*, where the plants (aboard the Redruth) reorganize human labor and technological practice. Similarly, in *Flood of Fire*, where steam technology produces a new distribution of agency among humans, machines, rivers, and coal. Agency in Ghosh's narrative is best understood as distributed rather than localized. Although humans initiate actions, but outcomes are continually shaped by ecological, technological, and nonhuman forces.

9.5 Theory and practice

The most important tension here is between Ghosh's theoretical critique and his own literary practice. *The Great Derangement* argues that conventional literary realism struggles to represent climate change, yet his fiction shows that conventional narrative techniques are modified and expanded rather than abandoned. His novels remain recognizable through characters, plots, and historical settings, which supplements realism with ecological spatiality, multiple temporalities, multilingual voices, and distributed agency. Ghosh acknowledges that the resistance of climate change to literary representation is not an "insuperable" obstacle, rather it successfully communicates the "uncanniness and improbability" of contemporary ecological transformation (Ghosh, *The Great Derangement* 61). This also suggests that ecological narrative may draw on non-Western and postcolonial forms (such as myth and oral tradition), which reframes the scope of environmental realism.

Taken together, these strategies show that Ghosh's ecological imagination works simultaneously at the level of content and form. His narrative style spatiality represents rivers, oceans, and ships (as unstable relational spaces); temporality connects

colonial history with planetary time. His multilingualism preserves multiple cultural and ecological knowledge systems; distributed agency challenges human exceptionalism; and his portrayal of theory/practice tension tests the capacity of literary form to represent ecological crisis. Ghosh's ecological narrative does not merely describe environmental interconnectedness. It formally reproduces it, turning ecological interdependence from a thematic subject into a principle of narrative organization.

10. DISCUSSION

The analysis shows that Ghosh's ecological imagination cannot be understood by only treating environmental crisis as a recurring theme across his fiction. *The Hungry Tide*, *The Great Derangement*, and the Ibis Trilogy approach ecological crisis from different historical and narrative positions. They also share a sustained concern with environmental instability, colonial history, human and nonhuman agency, and the capacity of literary form to represent ecological interdependence. This reveals a movement from representing ecological vulnerability to explicitly interrogating the narrative structures to showcase environmental realism.

10.1 Scale and orientation

The Hungry Tide concentrates on the contemporary Sundarbans, presenting ecological relations through the immediate experience of characters. The Ibis Trilogy moves back into the nineteenth century to reconstruct the historical processes, through which colonial capitalism transformed landscapes, commodities, and energy systems (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). Similarly, *The Great Derangement* theorizes the cultural and literary difficulty of imagining the climate crisis rather than representing it through fiction. These differences are complementary: *The Hungry Tide* reveals local and embodied consequences; the Ibis Trilogy reconstructs historical and material processes; and *The Great Derangement* interrogates the representational structures themselves. It is a progression from ecological experience (present) to ecological history (past), and ecological imagination (future).

10.2 Space, knowledge, and agency across the corpus

Spatially, the texts progressively widen the scale of ecological relations, from the Sundarbans in *The Hungry Tide* (where "there are no borders here to divide fresh water from salt, river from sea") to river and ocean and finally an imperial maritime network across the trilogy (Ghosh, *The Hungry Tide* 10). They support the postcolonial ecological argument that environmental space is historically produced through power dynamics and mobility (DeLoughrey and Handley; Huggan and Tiffin). In terms of knowledge, *The Hungry Tide* foregrounds the tension between Piya's scientific expertise and Fokir's experiential knowledge. Similarly, The Ibis Trilogy shifts the question from ecological to historical knowledge and *The Great Derangement* asks why these relationships have been difficult for modern literary culture to imagine. Thus, Ghosh frames climate change as a "crisis of culture" (Ghosh, *The Great Derangement* 13). In terms of agency, the corpus moves from multispecies encounter in *The Hungry Tide* to the material entanglement of plants and technology in the Ibis Trilogy, and distributed agency as a general principle. So, it connects to Alaimo's trans-corporeality and the broader posthumanist challenge to human exceptionalism (as Ghosh explores the relational nature of agency).

10.3 Slow violence and the theory-practice tension

Nixon's concept bridges the contemporary and historical dimensions of the corpus. Morichjhapi incident shows environmental governance entangled with forced displacement (Ghosh, *The Hungry Tide* 96), while the Ibis Trilogy shows slow violence operating over a longer historical process of agricultural restructuring and commodity circulation (Ghosh, *Sea of Poppies*; Ghosh, *River of Smoke*; Ghosh, *Flood of Fire*). The most significant finding of the comparison demonstrates the unusual relationship between *The Great Derangement* (non-fiction) and Ghosh's fiction. Ghosh argues that conventional realism struggles to represent climate change, yet his fiction shows that literary narrative can respond to this difficulty without abandoning historical storytelling or characterization. He does not reject conventional realism, rather redefines its spatial, temporal, material, and epistemological boundaries. His nonfiction identifies the limits of literary convention, and his fiction demonstrates the limitless possibility of modifying those conventions.

10.4 Original intervention

Existing scholarship has established important aspects of his ecological imagination (such as environmental justice, multispecies relations, colonial extraction, oceanic space). But, this study illustrates how ecological relations reorganize his narrative form. His concept of ecological narrative form reflects the ways environmental relations become embedded in the

organization of space, time, agency, language, focalization, and historical scale. Ghosh's oeuvre develops a continuum from ecological experience (starting from ecological history) to ecological imagination. His response to the climate crisis is not simply the addition of environmental themes to postcolonial fiction, but the ecological transformation of narrative form itself. His fiction does not merely represent ecological entanglement, rather the narrative structures perform that entanglement.

10.5 Contribution to ecocriticism and environmental humanities

These findings show that ecological crisis cannot be adequately separated from colonial history. Environmental injustice operates across different temporal scales, from immediate vulnerability to long historical processes of extraction and fossil-energy development. Moreover, the distinction between environmental literature and historical literature is increasingly unstable, since the history of commodities, plants, ships, and energy is also a history of ecological transformation. Ghosh's work provides a bridge between postcolonial ecocriticism, the Blue Humanities, and the emerging environmental and energy humanities. He gives a historical foundation to the representational crisis in *The Great Derangement*. His contribution lies not merely in his thematic engagement with ecology, but in his reconfiguration of narrative space, time, agency, and historical scale.

11. SCOPE AND LIMITATIONS

This study is interpretive and textual rather than empirical. It does not measure the actual environmental effects of the events represented in Ghosh's fiction, evaluate the scientific accuracy of individual ecological descriptions, or assess contemporary conservation policy. Its central concern is the literary representation of ecological relations and their relationship to postcolonial history and narrative form. Focusing on a single author necessarily limits the generalization of various ecological aspects. Future research may include comparative analysis of other writers with Ghosh, and also incorporate cross-cultural and geographical aspects of ecocriticism.

12. CONCLUSION

This study has examined Amitav Ghosh's ecological imagination through *The Hungry Tide*, *Sea of Poppies*, *River of Smoke*, *Flood of Fire*, and *The Great Derangement*. It presents ecological instability through fluid spatiality, layered temporality, multispecies relations, competing forms of knowledge, multilingualism, and the circulation of material and nonhuman forces. It shows how environment moves from narrative background to an active component of historical and literary meaning. The study's central theoretical contribution has been to treat slow violence, trans-corporeality, planetary/longue durée time, and blue/postcolonial ecological space as interconnected rather than separate concepts. The analysis moves beyond a thematic reading of Ghosh's works toward an examination of how ecological relations shape literary form itself. His unstable spaces, layered temporalities, colonial history perfectly synchronize with heterogeneous cultural and ecological knowledge. His distributed agency challenges anthropocentric narrative structure. The apparent tension between his critique of literary realism in *The Great Derangement* and his continued use of historical fiction is therefore productive rather than contradictory.

Ultimately, Ghosh's contribution to postcolonial ecocriticism and the environmental humanities lies in his ability to connect heterogenous aspects, such as colonialism and climate change, commodity circulation and environmental degradation, oceanic mobility and imperial power, human vulnerability and nonhuman agency, and local ecological knowledge and planetary history. His work suggests that understanding the ecological present requires not only new environmental knowledge, but also re-orientation of historical aspects. Thus, the ecological imagination in his fiction not simply a subject of representation, rather a method for rethinking literary history itself.

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All authors have accepted responsibility for the entire content of this manuscript and approved its submission. M.D. conducted the study, analyzed the data, and wrote the manuscript. S.L. designed the study, collected data; all authors contributed to writing.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

INFORMED CONSENT

Not applicable.

USE OF GENERATIVE AI

Large Language models were only used for language refining. They were not used to generate any idea.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, [M. D], upon reasonable request.

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