

LITERATURE AND SUSTAINABILITY IN BUKET UZUNER'S NATURE TETRALOGY: AN ECOCRITICAL ANALYSIS

LITERATURA E SUSTENTABILIDADE NA TETRALOGIA NATUREZA DE BUKET UZUNER: UMA ANÁLISE ECOCRÍTICA

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Abstract

This study examines Buket Uzuner's novels, Su (Water), Toprak (Earth), Hava (Air), and Ateş (Fire), which are fictionalised under the title, 'Uyumsuz Defne Kaman'ın Maceraları (The Adventures of Incompatible Defne Kaman)', within the framework of sustainability and ecocriticism. The manuscript aims to demonstrate that the four novels do not simply use the environmental crisis as a background element; rather, they transform it into a field of conflict and debate with ethical, political, and pedagogical dimensions. The study employs a combination of text-centred close reading, thematic content analysis, and critical discourse analysis within the qualitative research paradigm. Themes related to sustainability were identified under the headings of water management, energy regimes, ecological justice, cultural heritage, migration, and risk society. These themes were systematically coded throughout the four novels and evaluated through inter-novel comparison. The findings show that the tetralogy operates on three fundamental levels. First, the text establishes narrative strategies that treat nature as a value domain and an active entity, thereby critically questioning the anthropocentric perspective. Second, the tetralogy connects ecofeminist sensibility with intergenerational transmission, cultural memory, and everyday life practices, thus creating a functional ground for ethical learning and awareness. Third, the novels explicitly articulate the political and economic determinants of environmental problems by employing institutional critique and dystopian or ironic narrative elements. The study also exhibits that

Resumo

Este estudo examina os romances de Buket Uzuner, Su (Água), Toprak (Terra), Hava (Ar) e Ateş (Fogo), que são ficcionados sob o título "Uyumsuz Defne Kaman'ın Maceraları (As Aventuras da Incompatível Defne Kaman)", no âmbito da sustentabilidade e da ecocrítica. O manuscrito tem como objetivo demonstrar que os quatro romances não utilizam simplesmente a crise ambiental como elemento de fundo, mas sim a transformam num campo de conflito e debate com dimensões éticas, políticas e pedagógicas. O estudo emprega uma combinação de leitura atenta centrada no texto, análise de conteúdo temático e análise crítica do discurso dentro do paradigma da pesquisa qualitativa. Os temas relacionados à sustentabilidade foram identificados sob os títulos de gestão da água, regimes energéticos, justiça ecológica, patrimônio cultural, migração e sociedade de risco. Esses temas foram sistematicamente codificados ao longo dos quatro romances e avaliados por meio de comparação entre os romances. Os resultados mostram que a tetralogia opera em três níveis fundamentais. Primeiro, o texto estabelece estratégias narrativas que tratam a natureza como um domínio de valor e uma entidade ativa, questionando criticamente a perspectiva antropocêntrica. Segundo, a tetralogia conecta a sensibilidade ecofeminista com a transmissão intergeracional, a memória cultural e as práticas da vida cotidiana, criando assim uma base funcional para o aprendizado e a conscientização éticos. Terceiro, os romances articulam explicitamente os determinantes políticos e econômicos dos problemas



the portrayal of sustainability in the novel enables readers to internalize environmental issues beyond the level of knowledge, through their emotional involvement and ethical awareness.

Keywords: Ecocriticism. Ecofeminism. Climate Fiction. Sustainability. Sustainable Development Goals. Buket Uzuner. Defne Kaman.

ambientais, empregando crítica institucional e elementos narrativos distópicos ou irônicos. O estudo também mostra que a representação da sustentabilidade no romance permite que os leitores internalizem as questões ambientais além do nível do conhecimento, por meio de seu envolvimento emocional e consciência ética.

Palavras-chave: *Ecocriticismo. Ecofeminismo. Ficção Climática. Sustentabilidade. Objetivos de Desenvolvimento Sustentável. Buket Uzuner. Defne Kaman.*

1 INTRODUCTION

The century we live in harbours a great contradiction. While scientific and technological advancements are transforming our lives and increasing our productivity more than ever before, they are also exacting a heavy toll on all living and non-living entities on our planet. This alarming picture, combined with ecological disasters, uncontrolled population growth, unceasing energy demand, deepening social and economic inequalities, and increasing conflicts, is dragging the world towards a bleak future. (Summers & Cutting, 2016, pp. 1–8) Sustainability is discussed across a wide spectrum, from popular culture to academia and politics. The concept is often broadly defined as an approach to meeting the needs of the present without jeopardizing the ability of future generations to meet their own needs (Mensah, 2019, p. 5). This definition offers a theoretical framework that aims to balance current welfare goals with the principle of long-term intergenerational justice.

The complex global challenges of the 21st century have compelled humanity to unite around a shared vision for the future. The most concrete expression of this shared vision is the 2030 Agenda, put forward by the United Nations in 2015, which includes 17 Sustainable Development Goals (SDGs) (Morton vd. 2017, p.83; United Nations, 2015). This global roadmap aims not only to increase prosperity and consolidate peace, but also to make our planet habitable for future generations. However, it is acknowledged that achieving these ambitious goals is possible not only through policies but fundamentally through a radical transformation of societal mindset and daily habits (Kioupi & Voulvoulis, 2019, p.6). In this context, Quality Education (Goal 4) is identified as the

most fundamental lever and driving force that will trigger this societal transformation.(Merritt et al., 2018, p. 7) The vision is that by 2030, every individual will have acquired competencies across a wide range of areas, from sustainable lifestyles and human rights to gender equality and global citizenship awareness. This goal envisions individuals being equipped with the knowledge and skills to embrace a culture of peace and non-violence, to value cultural diversity, and to view culture as an integral part of sustainability (UNESCO, 2020, p. 14).

Literature, as one of the most important records of the history of civilization, has the power to capture the spirit of an era, its social structure, and the complex essence of humanity.(René Wellek and Austin Warren, 1949, pp. 89–90) Literary works form the foundation of our shared cultural memory, built upon humanity's rich accumulated knowledge throughout the ages, and function as an inexhaustible source of cultural capital that nourishes social identities.(Alonso et al., 2014, p. 131) Skilled authors have continuously enriched this heritage by reflecting universal truths and social dynamics. However, the value and function of literary texts are not limited to preserving a legacy from the past. The rich structure and multifaceted narrative power of literature make it an indispensable tool for contemporary education and social awareness. Literary works strengthen critical thinking skills,(Karatay, n.d., p. 9) solidify intercultural empathy,(Heggernes, 2021, pp. 1–12) and offer the opportunity to address global issues such as the ecological crisis(Mercer et al., 2023, pp. 393–406) within an analytical framework. Therefore, managing the potential of this valuable heritage, which fosters intergenerational knowledge transfer and creativity, necessitates addressing it from a sustainability perspective. This approach aims not only to preserve the heritage but also to keep it in meaningful interaction with current and future societal needs.

Literary texts have the power to transform our perception of nature and humanity.(Heise, 2016, p. 13) Through the world of narrative, it transports the reader into an emotional and intellectual experience. In this way, abstract ethical principles can be linked to concrete life situations. Characters and plotlines exemplifying sustainable behaviour nourish the reader's value orientations. The consequences of profligacy or the benefits of community solidarity become visible not as theoretical concepts, but as lived realities. Within this context, literature transcends being merely an aesthetic activity and becomes a learning environment that reinforces attitudes and intentions towards

sustainability.(Mackenthun, 2021, p. 4049) Literary works contribute to sustainability on three levels. First, they support the construction of attitudes and values. Nature ceases to be merely a background element and becomes visible as a fragile shared entity. The reader feels the vulnerability of the ecosystem and internalizes the responsibility for its conservation. Second, the function of behavioural modelling comes to the fore. Characters who are mindful of water use or reduce waste provide concrete examples, and the reader relates these examples to daily life. Third, by connecting individual choices to economic, social, and ecological networks, they highlight the cause-and-effect chain (Bhagwanji&Born, 2018, p. 85-102).

Sustainability is often perceived today as a technical field, discussed primarily through reports, strategy documents, and scientific data. However, it's not always just knowledge that transforms people's values, future aspirations, and daily habits; storytelling, imagination, and narrative worlds also play a fundamental role in this transformation. Novels with a sustainability theme play a crucial role precisely at this point. These novels explore the ruptures in the human-nature relationship,(Guanio-Uluru, 2019, pp. 5–19) struggles for justice, the invisible costs of ecological destruction, and the possibilities for restoration, not just as abstract concepts, but within concrete life stories (Buell, 2001, pp. 1–3; Dahlstrom & Scheufele, 2018, p. 3) . The reader, while being informed by following a town struggling with drought, marginalized communities, climate migrants, or solidarity networks through the eyes of the characters, also undergoes an emotional, ethical, and political test.(Horlacher, 2025, p. 8) Thus, sustainability ceases to be a technical issue that stands as an external environmental problem and becomes an existential question that one grapples with in one's own life.

One of the strongest aspects of sustainability-focused novels is their ability to embody complex system relationships through narrative.(Myren-Svelstad, 2020) Complex issues such as the climate crisis, biodiversity loss, disruptions in the food chain, or energy policies are represented not through abstract schemas, but within a world woven with human faces, places, and everyday details. One novel depicts how increased consumption deepens urban poverty, another shows the ecological and social devastation caused by a mining site in a valley, and yet another describes how a riverside village is transformed by a dam project. These scenes allow the reader to sense cause-and-effect

chains, power relations, and hidden costs. Hence, instead of cold concepts, the reader internalizes the narrative through its flow.

The ethical space established by these novels does not leave the reader in the position of a passive witness; it compels them to make decisions, to choose sides, to question their own role.(Filutowska, 2023, p. 31) When authors avoid one-dimensional good-evil schemas and instead construct colourful characters(Mackenthun, 2021, p. 4049) and conflicts, the discourse on sustainability transcends clichés. To illustrate, a corporate executive can be portrayed not only as a destructive force but also as an actor grappling with their own contradictions. Within the local community, conflicts of interest, fears, solidarity, and submission can be intertwined. This polyphony protects the reader from simplistic moralism; rather, it invites them to a more refined reasoning around concepts of justice, responsibility, obligation, and right.(Meisch, 2019, p. 7)

Creative narrative strategies are another dimension that enhances the transformative potential of sustainability-themed novels. The disruption of the timeline, dystopian narratives looking at the present from the perspective of the future, and chapters where natural elements such as forests, rivers, and animals virtually become narrators, shake the reader's accustomed human-centred perspective.(Huber & Rodoreda, 2024, p. 145) Some novels document the silent progression of ecological destruction by following the slow changes over the years, rather than the immediate aftermath of a disaster.(Nixon, 2013, p. 2) Others, however, approach global crises from a micro perspective(Wood, 2022, p. 45), looking through the kitchen of a single household or the marketplace of a single neighbourhood, framing them through small gestures and repetitive daily choices. This diversity enriches the discourse of sustainability with multiple aesthetic possibilities, rather than confining it to a single narrative pattern.

Viewed through a comparative lens, novels with sustainability themes point not only to today's crises but also to a broader reckoning of civilization. Bringing together novels from different periods and geographies reveals how the relationship between humanity and nature has been re-established throughout history,(Heise, 2008, p. 387) and how concepts such as dominance, exploitation, ownership, and hospitality have been redefined. When we consider processes such as colonial expansion, industrialization, urbanization, and digitalization together, these novels function as literary archives that record not only environmental degradation but also memory loss, the erosion of the sense

of place, and the disintegration of community ties.(Başaran, 2007, p. 65) That is why, sustainability is not limited solely to the goal of protecting nature; it is situated within a broader framework that acquires political and ethical dimensions such as justice, representation, the right to speak, and responsibility towards future generations(Bartosch & Hoydis, 2025, p. 2). The impact of these novels on the public sphere is also noteworthy. Sustainability-themed works that gain popular or critical acclaim influence much wider audiences through film adaptations, digital storytelling, book clubs, and social media discussions.(Schneider-Mayerson, 2018a, p. 474) A local struggle depicted in a novel can inspire a real environmental movement elsewhere. The internal conflict experienced by a fictional character can allow the reader to question their own comfort zones. Through commentaries, critical essays, and interviews, these novels create a platform for discussion that intersects with the academic world, activism, and other forms of cultural production. All of this demonstrates that novels with sustainability themes have become one of the key actors in the dialogue surrounding the ecological and social crises of our time. These novels redefine sustainability not as a distant future vision, but as an obligation to be understood through the choices, habits, and relationships of the present.(Nakano & Hondo, 2023, p. 2) It stimulates empathy, sharpens ethical sensitivity, and deepens intuition about complex systems. When the reader closes the text, they are not only left with the aesthetic pleasure that follows a good story; they are also left with difficult questions about their own lifestyle, consumption patterns, and relationships with others and the world. In this respect, novels with sustainability themes position themselves as transformative literary subjects, not only through the worlds they represent but also through their interventions that force the reader to rethink their own world.(Schneider-Mayerson, 2018b, p. 493)

Studies in the field of literature expand individuals' capacity to read, interpret, and make sense of the society and the global order in which they live, while offering concrete opportunities to diagnose, discuss, and confront economic, ecological, and social problems.(Down, 2006, pp. 390–393) Theoretical discussions and critical reading processes shaped around sustainability-oriented novels make it possible to transform the Sustainable Development Goals from abstract objectives relegated to an uncertain future into an urgent ethical agenda requiring consideration and action today.(Guanio-Uluru, 2019, pp. 5–19) Thus, the Sustainable Development Goals transcend being merely a

subject of technical policy discourse and emerge as a comprehensive framework of values that needs to be re-examined around the concepts of justice, responsibility, intergenerational obligation, and the common good. In the same vein, literature-centred and discussion-oriented pedagogical frameworks become methodological tools that significantly contribute to the development of ecocritical awareness and competence. This enriches the reader's connection with novels, considering their environmental and social dimensions.(Goga & Pujol-Valls, 2020) Research on literature-focused approaches reveals that analytical and emotional engagement with literary works fosters an empathetic mindset and strengthens the desire to participate in concrete initiatives aimed at protecting the environment.(Lin & Li, 2024) Reflective essays, critical analyses, and creative responses produced around novels with sustainability themes offer an extremely fruitful field for observing the shift in mindset experienced within the context of sustainability education. Through these texts, it becomes possible to concretely trace the position the reader chooses—whether alongside or against the characters—the images and metaphors through which they contemplate the future and shared life, and the scenes in which they experience guilt, anger, anxiety, or hope.

From this perspective, literary texts, by activating the creative possibilities of language, carrying and transforming networks of values and counter-values, and being internalized through close reading, constitute an extremely favourable starting point for the development of sustainable development awareness. Careful reading processes serve the transmission of content, encouraging the questioning of thinking habits, established assumptions, and normative frameworks, hence leaving lasting intellectual impressions. In essence, the purposeful and systematic use of sustainability-themed novels, and literature in general, fosters an understanding of the Sustainable Development Goals and encourages the development of positive attitudes toward them.(Encabo-Fernández et al., 2023) A text-based, exploratory approach builds a mental and emotional foundation that prepares individuals for actions aimed at dealing with serious global problems. In this sense, literature emerges both as a surface reflecting current crises and as a constitutive space of possibility that enables new ways of thinking, feeling, and acting in the face of these crises.(Ağır, 2023)

2 BUKET UZUNER'S NATURE TETRALOGY

This theoretical framework requires not only definition at the conceptual level but also validation through application to concrete texts. In this regard, Buket Uzuner's nature tetralogy (*Su*, *Toprak*, *Hava*, *Ateş* – Water, Earth, Air, Fire) is particularly noteworthy as one of the corpora of works written in contemporary Turkish literature that claims to address sustainability, ecological justice, and ecofeminist sensibilities. Published between 2012 and 2023, these four novels, through their formal and thematic choices, offer a rich ground for discussion intersecting with the Sustainable Development Goals (SDGs), and also constitute a fruitful area of study in terms of demonstrating the tensions between literary depth and didactic purpose.

The fictional universe of the tetralogy is woven around different geographies and issue topics: femicide and gender-based violence in Istanbul (*Su – Water*)(Uzuner, 2025b), the looting of cultural heritage and the smuggling of historical artifacts in Çorum (*Toprak – Earth*)(Uzuner, 2025c), nuclear energy policies and the dynamics of the risk society in Kayseri (*Hava – Air*)(Uzuner, 2025a), and the issue of migration and refugees in Mardin (*Ateş – Fire*)(Uzuner, 2023). The theme of global warming, which accompanies all the texts, and the fictional architecture built around four elements, transform the series from merely environmentally conscious novels into a collection of texts that discuss different dimensions of the sustainability discourse, such as gender, cultural heritage, energy, migration, and justice. The extensive space opened up here to Turkish mythology, and especially to nature-centred beliefs and narrative motifs, holds the potential to connect the SDG framework with local cultural codes. Thus, ecological values are reinterpreted not as abstract principles, but through ancient narratives and collective memory.

Nevertheless, the strongest aspect of the tetralogy in terms of sustainability is the diversity of issues they address within the fictional world. Uzuner tackles problems such as sectarian tensions, domestic abuse, generational conflicts, ruptures in father-son and mother-daughter relationships, and social justice intertwined with the ecological crisis. The investigative perspective of researcher-journalist Defne Kaman and the figure of Grandma Umay, nourished by healing, pharmacy, and mythological knowledge, aims to transform these multiple crises from mere news reports or individual dramas into part of

a structural inquiry. In this sense, the tetralogy attempts to bring the SDGs to the stage not merely as headlines in political documents, but as concrete contradictions and conflicts shaping daily life. This positions the texts as a resource that can be used in sustainability education.

On the other hand, this powerful thematic architecture is established at a cost on the literary level. Grandma Umay's transformation into a kind of spokesperson figure, articulating ecological principles, Turkish mythology, and correct values in almost every scene, overshadows the character's psychological depth. Rather than a novel character with suffering, weaknesses, and hesitations, she speaks like a representative, teaching the reader about ecofeminism and mythological references. This stark contrast between Defne Kaman and the consumer-oriented mother and sister characters positioned opposite her reinforces a didactic good-versus-evil dichotomy instead of establishing multi-dimensional human types. This choice, while strengthening the transmission of values based on sustainability, instrumentalizes the characters. As a result, the text acquires an allegorical and at times schematic quality.

A similar tension is felt in the structural plot of the novels. The detective-like narrative woven around Defne Kaman's disappearance in each book and the subsequent search for her offers an engaging and compelling framework, but in the later books of the series, it leaves the reader with a sense of predictable formulaic endings. The recurring physical descriptions of things like bags, hair, and shoes, and the similar investigative dynamics in each book, create a kind of cyclical repetition in the overall reading of the tetralogy. While this repetition ensures the retention of themes of sustainability and characters, it limits aesthetic intensity and the possibility of surprise, meaning a clear imbalance emerges between Uzuner's didactic goals and her courage to take literary risks.

From a sustainability perspective, the Nature Tetralogy holds twofold significance: On the one hand, it powerfully raises issues directly related to the SDGs in contemporary Turkish novels, such as the climate crisis, gender inequality, migration, energy policies, and the plundering of cultural heritage, and introduces them to a wide readership. On the other hand, the aesthetic limitations and risks of didacticism encountered in the process of achieving these goals are extremely instructive in terms of expanding the internal debates within sustainability literature. Therefore, Buket Uzuner's tetralogy can be read both as nature-sensitive novels and as a foundational laboratory of

texts that demonstrate the possibilities and impasses of the relationship between literature and sustainability. This makes it a valuable example for sustainability-focused readings in contemporary Turkish literature.

3 METHOD

3.1 Research design

This study is designed as a text-centred interpretive analysis positioned within the qualitative research paradigm. The study aims to analyse Buket Uzuner's nature tetralogy (*Su, Toprak, Hava, Ateş – Water, Earth, Air, Fire*) in the context of literature and sustainability, revealing how these novels fit into both ecocritical discussions and the context of sustainability-focused literature education and Sustainable Development Goals (SDGs). In this context, the study is structured as an interpretive and critical textual analysis whose theoretical framework is nourished by ecocritical approaches, ecofeminism, sustainability education, and SDG literature.

3.2 Data source and sample

The primary data for this research consists of four novels by Buket Uzuner published between 2012 and 2023, all of which are structured around the four elements of nature:

- *Su – Water* (İstanbul, femicide and gender-based violence),
- *Toprak – Earth* (Çorum, smuggling of historical artifacts and looting of cultural heritage),
- *Hava – Air* (Kayseri, nuclear energy policies and risk society),
- *Ateş – Fire* (Mardin, migration and refugee experiences).

This tetralogy was selected through purposive sampling because it directly addresses themes central to sustainability literature, such as climate crisis, ecological justice, gender, migration, energy, and cultural heritage, and contains explicit references to Turkish mythology, environmental activism, and ecofeminist sensibilities. The secondary data in this study consists of critical essays, interviews, and discussions in the

ecocritical literature written about the tetralogy. These texts were used as contextual material supporting the novel analysis, but they did not replace the fictional texts as the main unit of analysis.

3.3 Theoretical framework and analytical foci

The analysis is based on a three-stage theoretical framework:

1. Ecocritical approach and ecofeminism: The human-nature relationship, the representation of non-human entities, the questioning of anthropocentric discourse, metaphorical-political planes constructed through nature and women.
2. Sustainability and SDGs: The intersection of themes explored in novels, particularly those related to SDGs such as climate action, gender equality, quality education, sustainable cities and communities, peace, justice, and strong institutions.
3. Literary pedagogy: The potential of texts in terms of learning outcomes such as sustainability-oriented mindset transformation, empathy, ethical reasoning, and systems thinking.

Within this framework, novels have been examined around the following analytical foci:

- The representation of nature and non-human entities (background: just the backdrop or an autonomous agent?),
- The positioning of sustainability themes (climate crisis, ecological justice, migration, energy, cultural heritage) within the narrative,
- Analysis of character development (especially Defne Kaman and Grandma Umay) in terms of value transmission, allegory/didacticism, and instrumentalization,
- How Turkish mythology and local cultural codes are related to ecological sensitivity and SDGs,
- The tension and possibilities between the structure and genre choices of the tetralogy (plot approaching detective fiction, repetitions, use of encyclopaedic information) and sustainability goals.

3.4 Data analysis process

The data analysis employed a combination of close reading, thematic content analysis, and critical discourse analysis. First, the four novels were read repeatedly to identify sections, characters, motifs, and narrative strategies relevant to sustainability. In this initial stage, explicit codes (e.g., climate crisis discourse, ecofeminist figures, mythological references, didactic dialogue, nature-character relationship) were established. In the second stage, these explicit codes were grouped under higher-level themes: narratives of sustainability and justice, ecofeminist sensibility and intergenerational transmission, the position of nature within the narrative (setting, background, character, ethical reference), didacticism, allegorical structure, and aesthetic tension. In the third stage, these themes were read comparatively with the theoretical framework of the study; interpretive deepening was carried out through representative passages selected from the novels. That is why what the texts say, how they say it, and which narrative choices they use to open up and close horizons of meaning regarding sustainability were opened up for discussion. To ensure the internal consistency of the study, the coding and thematic classification process was reviewed in several rounds iteratively, and the initial findings were reinterpreted comparatively with different ecocriticism and sustainability sources. It was acknowledged that, by the nature of interpretive analyses, the researcher's position and theoretical preferences shaped the analysis; hence, the passages on which the interpretations were based were clearly indicated in the text, and the discussion was conducted in continuous dialogue with different approaches in the literature.

The main limitation of this research is that the subject of study is limited to four novels by a single author, and the analysis remains purely text-based, indirectly discussing reader reception. Further studies, supported by reader research, interviews, and ethnographic methods, will offer a more comprehensive opportunity to examine the concrete effects of Buket Uzuner's nature tetralogy on sustainability education and SDG awareness. That being said, this study aims to create a conceptual and methodological foundation for both contemporary Turkish novels and sustainability-focused literary research by analysing the tetralogy in detail from the perspective of literature and sustainability.

4 THE RELATIONSHIP BETWEEN LITERATURE AND SUSTAINABILITY IN BUKET UZUNER'S NATURE TETRALOGY

From a sustainability perspective, water is not merely a resource that can be reduced to energy or consumption. It is a vital, shared asset that carries biodiversity, ecosystem continuity, and the future of societal life together. Therefore, any intervention concerning water should be evaluated not only in terms of development discourse but also in terms of ecological balance, climate risks, and public responsibility. (Voulvoulis et al., 2017, p. 360) It is precisely at this point that Uzuner transforms water management from a technical choice into an area of ethical and managerial inquiry: *“Why are laws being hastily passed to build hydroelectric power plants in place of streams that, under the name of “land,” provide life to thousands of living beings connected to each other through food chains, thus serving us humans? Haven't even children understood that this destruction of nature, which causes droughts and floods, is actually our own doom? Why is the DEVLET (STATE), whose very meaning is MUTLULUK (HAPPINESS [in Turkish]) and which should make its people happy, strangling Mother Nature against the will of its people?”* (Uzuner, 2025b, p. 38) Uzuner frames the stream not as a purely technical body of water, but as an ecosystem that produces *“thousands of living beings... lives connected by a food chain.”* So, water ceases to be merely a resource for meeting human needs and becomes the carrier of a network of relationships that makes the continuity of life possible. While the phrase *“streams that serve us humans”* might seem to speak from an anthropocentric perspective, the subsequent emphasis on *“lives connected by a food chain”* expands the view of the stream as a multifaceted living space and compels the reader to adopt an ecosystem-based perspective. Uzuner does not address the hydroelectric power plant within the framework of neutral choice regarding energy production. By emphasizing laws, she elevates the discussion to an institutional level and directs responsibility towards political and administrative decision-making mechanisms. Within this framework, the critique is not limited to the projects themselves. The regulatory structures that make these projects possible also become part of the questioning. Environmental destruction cannot be explained as the sum of individual mistakes. It becomes visible as a governance problem shaped by the choices of public authorities. Consequently, the passage invites the reader to both an emotional response

and a questioning of decision-making processes. The phrase, "*this plunder of nature that causes droughts and floods*," directly links environmental crises to human-made interventions. That is why, droughts and floods are not relegated to a fatalistic narrative within the category of natural disasters; they are treated as the aftermath amplified by flawed planning and a destructive development approach. The question, "*Didn't even the children understand?*" establishes a moral shame strategy by presenting this relationship as an obvious reality, weakening the reader's defences. The most striking aspect of the passage is its depiction of environmental destruction using violent language: "*strangling Mother Nature*." These images refuse to portray environmental intervention in a sterile, investment-like manner, presenting the destruction as an assault on bodily integrity. Thus, the text transforms the sustainability debate from the cold language of technical reports into an ethical discussion, strongly establishing the idea that damage to the ecosystem is damage to humanity's own future. In this respect, the text addresses SDG 6 (Clean Water and Sanitation) in the context of the sustainable management of water resources; SDG 15 (Life on Land) through the establishment of the stream ecosystem as a multi-species life network; and SDG 13 (Climate Action) through the linking of impacts such as drought and floods to human-induced destruction. From a sustainability perspective, soil is not a passive ground on which we live, but rather a living network that holds, nourishes, and connects countless species. The continuity of this network is possible through the efficient use of resources and a rethinking of the ethical relationship that humans have with non-human entities. It is precisely at this point that Uzuner conceptualizes the ecological order as a kind of cohabitation contract by establishing a language of rights and responsibilities regarding soil:

"The earth is a community of living beings. Everything alive has its own right to life and its own morality. On our planet, no living being exists independently of another. The essence and continuity of existence is this cycle of mutual responsibility and rights. It is called the 'Constitution of Life'. When the constitution is broken, life ends. The end doesn't happen instantly. First, order and balance are disrupted, then little by little, immobile species become extinct."(Uzuner, 2025c, p. 365) Uzuner makes a radical ontological choice regarding the earth, defining it not as inanimate matter, but as a community of living beings. This perspective fundamentally transforms our relationship with nature. Nature is not a resource over which we can exert dominion; it is a community

of which we are a part, a community in which we exist. This ontological choice moves away from the anthropocentric understanding that sees humanity outside and above nature, and positions us as equal members of the ecological whole. The ethical consequence of this definition is immediate: the concepts of the right to life and morality cease to be exclusive to humans; they expand to encompass all living beings. Uzuner, in this regard, proposes a nature-centred framework of responsibility in place of the anthropocentric measure of utility, compelling the reader to consider an ethical framework that also takes into account beings other than humans. The metaphor of the "*Constitution of Life*" establishes the ecological order as a normative structure. It's as if interspecies relations are a binding "life contract" operating through mutual rights and obligations. The statement, "*When the constitution is broken, life ends,*" elevates sustainability beyond a purely technical environmental management issue, positioning it as the preservation of the order that sustains life itself. The emphasis on the constitution here suggests that protecting the land is not a choice, but a necessary principle for the continuation of existence. Uzuner's strongest warning concerns the form of collapse: "*The end doesn't happen suddenly.*" Ecological destruction often occurs not as a sudden catastrophe, but as a chain of extinction that begins with the disruption of order and balance, and then progresses slowly. The text's emphasis on "*immobile species*" points to the silence of the loss: species that remain hidden, vulnerable, and invisible are the first to disappear. This highlights the importance of early warning and preventive measures for sustainability, because once the balance is disrupted, recovery becomes increasingly difficult. Within this framework, the foundation of sustainability is established as a cycle of rights and responsibilities. Here, sustainability is not merely the intention to protect nature, but rather the obligation to maintain the ecological relationships that make the continuity of life possible. Accordingly, while Uzuner brings the reader closer to the feeling that it is not too late, she simultaneously produces a harsher warning: if the constitutional order breaks down, collapse becomes inevitable, but this will proceed slowly and silently. Within this flow, the text's allusions to the SDGs are also evident. The disruption of "*balance*" and the gradual extinction of species directly aligns with SDG 15 (*Sustainable Development in the European Union – Monitoring Report on Progress towards the SDGs in an EU Context – 2025 Edition*, 2025, p. 38) (Life on Land). An ethical framework built around the axes of "*right to life,*" "*morality,*" and

"responsibility" fosters the idea that production and consumption practices can disrupt ecosystem order, hence creating an intellectual foundation that supports SDG 12 (European Commission. Statistical Office of the European Union., 2025, p. 212) (Responsible Consumption and Production).

From a sustainability perspective, air is not just a mixture we breathe. It is a living environment that is rapidly becoming fragile due to energy choices, consumption habits, and ecosystem destruction. Therefore, Uzuner frames the question "*which energy are we choosing?*" not through the lens of efficiency and cost, but through the lens of risk, waste, biodiversity, and the symptoms of the climate crisis. While guiding the reader towards the idea of a transformation where alternatives are possible, rather than despair, she also reveals the ethics of the crisis.

"While industrialized countries like Germany, France, Japan, Switzerland, and Taiwan are shutting down their nuclear power plants one by one and switching to renewable energy sources, it is suicidal for a nation like ours, which is located in the Mediterranean and Anatolia, home to some of the world's richest biodiversity, and also situated on one of the world's most important earthquake zones, to build nuclear power plants. Because nuclear leaks and nuclear waste are radioactive, they are deadly. We live in an era where solar and wind energy are abundant." (Uzuner, 2025a, p. 129) Uzuner frames the energy issue not in terms of production capacity, but in terms of risk. Her emphasis on earthquake zones establishes local conditions as a determining criterion in the technology debate. Because the same technology does not produce the same results in every geography, risk must be considered in conjunction with location. The judgment that it is suicide is the text's shocking climax. She treats the nuclear option not as a technical choice, but as an existential threat. The subsequent emphasis on nuclear leaks and nuclear waste demonstrates the nature of the risk. Here, the problem is not just the possibility of an accident, but a long-term and lethal permanence. Uzuner does not see criticism as opposition. On the contrary, by mentioning solar and wind energy, she opens up a horizon of solutions and does not trap the reader in a psychology of lack of alternatives. Sustainability focuses here on two axes: (i) safety/waste risk and (ii) accessibility to renewable resources. In this respect, it reminds us that sustainability is not only about clean production but also about risk management and accounting for long-term impacts. This perspective is directly linked to SDG 7 (European Environment

Agency., 2022, p. 9) (Affordable and Clean Energy), to SDG 13(European Commission. Joint Research Centre., 2025, p. 15) (Climate Action) through energy transition, and to SDG 15(European Commission. Directorate General for Environment., 2021, p. 9) (Life on Land) through biodiversity sensitivity.

Uzuner also states, *“Poor trees are blooming in the middle of winter, we are destroying the world's rivers with hydroelectric power plants, its forests with mines and concrete hotels, and its seas with our plastic waste. We have poisoned the air with fossil fuels and our greed for eating more meat”*. So, she does not reduce the climate crisis to a single strand. Rather, she connects hydroelectric power plants, mining, urbanization, plastic waste, fossil fuels, and consumption habits in the same sentence, framing the crisis as a systemic chain. The observation of flowers blooming in the middle of winter brings grand concepts down to earth: the crisis is no longer a distant piece of data relegated to reports, but a deviation observed in the behaviour of the season. The plural and definitive verbs, such as *“we are destroying”* and *“we have poisoned,”* establish a collective agent by not assigning responsibility to an external actor. The most critical rupture comes with the word greed. According to Uzuner, the issue is not solely about technology or infrastructure, but rather the ethical dimension of desire, habit, and consumption patterns. Accordingly, the text views sustainability not as a single mistake, but as a whole of interconnected interventions; it implies that transformation is possible not only through technical solutions, but also through behavioural change and a critique of consumption. This context directly invokes SDG 12(*Sustainable Development in the European Union – Monitoring Report on Progress towards the SDGs in an EU Context – 2025 Edition*, 2025, p. 32) (Responsible Consumption and Production), while strongly pointing to SDG 13(*Sustainable Development in the European Union – Monitoring Report on Progress towards the SDGs in an EU Context – 2025 Edition*, 2025, p. 34) (Climate Action) with its emphasis on fossil fuels and seasonal variations, SDG 14(*Sustainable Development in the European Union – Monitoring Report on Progress towards the SDGs in an EU Context – 2025 Edition*, 2025, p. 36) (Life Below Water) with the statement *“we are destroying the seas”* through plastics, and SDG 15(*Sustainable Development in the European Union – Monitoring Report on Progress towards the SDGs in an EU Context – 2025 Edition*, 2025, p. 38) (Life on Land) with its forest-mine-stream connection.

The sustainability debate often remains at the level of good intentions when it is limited to calls to protect nature; however, the real crux of ecological destruction is whether harmful actions are linked to a regime of accountability and sanctions. Therefore, this text moves the discussion of environmental destruction from an ethical concern to one of law, crime, and ecological justice; it examines the questions of ‘who caused the harm, whether they did it knowingly, and how they will be held accountable’: *“Another concept that will be frequently heard in the remainder of the 21st century is 'ecocide'. These are criminal acts committed knowingly, intentionally, and illegally or arbitrarily, with a high probability of causing severe, long-term, or widespread damage to the environment. Even when committed against a limited geographical area, ecocide is a crime against the entire planet, our home, all living beings, nature, and all of humanity. The hierarchical system established by humans has disrupted their relationship with nature.”* (Uzuner, 2023, pp. 444–445) Uzuner's first move is to move beyond classifying environmental destruction as a misapplication or unfortunate consequence, and instead label it as a direct criminal act. The phrase “knowingly and willingly” emphasizes the element of intent; the harm is not merely due to carelessness, but was perpetuated despite being foreseeable. The emphasis on unlawful or arbitrary actions highlights that the act constitutes a normative, not a moral, violation. However, the issue here is not only the damage to nature, but also the fact that the decisions causing the damage have escaped accountability. Thus, the text moves the ecological crisis out of the realm of technical reports and into the realm of responsibility and accountability. Uzuner's second significant step is to expand the destruction occurring in a limited geographical area to the entire globe, establishing the boundless nature of ecological damage. The idea that even local destruction is considered a crime against our home, the world, and all living beings, is based on the concept of ecological interdependence. According to her, ecosystems are not fragmented; destruction in one place creates chains that indirectly affect life elsewhere. This expansion does not confine ecocide to a narrow area like environmental crime, but rather reveals the universal dimension of ecological justice by associating it with humanity and the idea of a shared future. Uzuner's hierarchical systemic expression takes the text's aim beyond the level of individual perpetrators and projects, seeking the root of the problem in a worldview. The anthropocentric, hierarchical classification that places nature below it and views it as limitlessly usable is

the fundamental mechanism that disrupts our relationship with nature. This interpretation removes sustainability from the realm of well-intentioned actions because the real issue is that the harmful practices of powerful actors do not go unpunished, that the law recognizes environmental damage, and that institutions can enforce it. Uzuner explicitly addresses sustainability as a matter of accountability, emphasising the ideas of sanctions and justice. Within this framework, the SDG connections also become clearer: defining environmental destruction as a “*crime*” and making it legally permissible directly calls into question SDG 16 (*Sustainable Development in the European Union – Monitoring Report on Progress towards the SDGs in an EU Context – 2025 Edition*, 2025, p. 40) (Peace, Justice, and Strong Institutions). The emphasis on “serious, long-term, or widespread harm” is strongly aligned with SDG 15 (*Sustainable Development in the European Union – Monitoring Report on Progress towards the SDGs in an EU Context – 2025 Edition*, 2025, p. 38) (Life on Earth) and SDG 13 (*Sustainable Development in the European Union – Monitoring Report on Progress towards the SDGs in an EU Context – 2025 Edition*, 2025, p. 34) (Climate Action), considering ecosystem destruction and climate impacts.

Buket Uzuner's Water-Earth-Air-Fire tetralogy, titled "The Adventures of Incompatible Defne Kaman," treats sustainability not as a secondary theme but as an ethical problem area that forms the backbone of the narrative. The four fundamental elements, in addition to being physical manifestations of nature, act as moral pillars of life: water represents purification and flow; earth represents fertility and patience; air represents breath and justice; and fire transforms into a narrative force representing dissent combined with knowledge. This construct moves the reader from viewing nature as mere scenery to presenting a nature-centred language of responsibility against anthropocentric comfort. Sustainability here is less a matter of technical management and more an ethical test where values, habits, and institutions are challenged. The tetralogy progresses within the framework of central motifs such as recurring critiques of consumption, energy regimes, ecological justice, institutional critique, and ecocide discourse in different contexts.

One of the most prominent common threads in the tetralogy regarding sustainability is its sharp critique of consumer culture. In the novel, the boundary between need and waste becomes a moral dividing line. Uzuner views human intervention in

nature as a sin. This critique, particularly through the lens of plastics and fossil fuels, rests on the idea that the comfort zone of modern life is actually the sum of wrong choices that accelerate ecological collapse. The sentence in "Water," *plastic is a cursed invention that will bring about the end of the human race*," is an alarming statement targeting both the waste management debate and the civilizational aspect of consumption. The exaggerated tone here enhances the warning power of literature, persuading the reader with information and attempting to awaken them by shaking them.

In the tetralogy, the critique of consumerism does not remain at the level of individual moral lessons. It is intertwined with energy regimes and extended to institutional and structural dimensions. This critique goes beyond individual consumption habits and targets systemic problems, power relations, the use of energy resources, and the social structures organized around these resources. Thus, the critique moves from a purely moral stance questioning personal choices to a political ground questioning the social and economic order itself. In the novel "Water," the reduction of rivers to energy sources reveals the mentality that transforms nature from a living whole into a usable raw material. The question: "Why are laws being passed to build hydroelectric power plants in place of rivers?" (Uzuner, 2025b, p. 24) is not merely an environmental objection, but also a legal and public interest debate. Because the critique directly addresses the law and the state, the issue of sustainability is shifted from technical planning to the realm of public responsibility. This approach, combined with the institutional critique that permeates the entire tetralogy, offers the reader an important idea: the source of ecological destruction is not solely the wrong consumption habits of individuals. The destruction is fuelled by poorly constructed systems, dysfunctional media, and blinded governance. This perspective removes the ecological crisis from the confines of individual responsibility discourse and points to structural problems. The problem lies in forms of governance, institutional structures, and the logic of social organization.

The critique of institutions is further sharpened by the series' dystopian and ironic elements. Elements like the "*Ministry of Climate Change Denial*" (Uzuner, 2025a, p. 17) carry an aesthetic of exaggeration, but this exaggeration is used to draw attention to the denial mechanisms of the modern world. The novels constantly remind us that sustainability is not only a matter of the environment but also of justice. The phrase "*justice is the foundation of peace*" (Uzuner, 2025a, p. 195) in "Air" seems like a classic

proposition for human society, yet within the quatrain structure, it emphasizes the idea of ecological justice. According to Uzuner, the disruption of the ecosystem is also the disruption of social peace. Because nature is the infrastructure of life.

Another element that enhances the sustainability effectiveness of the tetralogy is its transformation of interspecies empathy into a moral threshold. The sentence in "Water," "*a person who does not love dolphins cannot reach dolphins*," (Uzuner, 2025b, p. 196) is more than a simple call to love. Here, the author criticizes humanity's arrogant position of placing itself at the centre of nature. In the novel, the dolphin, in addition to being an animal figure, becomes a measure of sensitivity, refinement, and connection with the ecosystem. This interspecies empathy is also supported by the allegorical positioning of animals such as dolphins, deer, eagles, and horses in the novels. Animals function like a memory of nature, reminding us of the discernment that modern reason has lost. In fact, they are nature's witness against humanity's forgetfulness.

On the other hand, the theme of energy and risk is situated within a harsher and more contemporary political context in the novel "Air". The sentence, "*for a nation living in an earthquake zone, building a nuclear power plant is suicide*," (Uzuner, 2025a, p. 129) links the sustainability debate to risk management and the right to life. The same novel's statement, "*we are destroying the world's rivers with hydroelectric power plants, its forests with mines and concrete hotels, and its seas with our plastic waste*," (Uzuner, 2025a, pp. 25–26) unites energy policies and the mining regime within a single logic of plunder. The literary strategy here is clear: the novel forces the reader to consider ecological destruction not in fragmented parts, but as a holistic system. The reader is invited to look not only at a debate about a single project or power plant, but at the multiple forms of attack directed at life itself.

One of the fundamental narrative strategies that strengthens the tetralogy's connection to sustainability on a literary level is the mythical depth of the narrator's voice. The 3000-year-old storyteller identity (Uzuner, 2023, p. 72) emphasised in the novel gives the narrative a timeless structure. The ecological crisis ceases to be a matter of today and becomes linked to the recurring blindness of human history. In this way, the novel highlights one of the most critical problems of sustainability—the tendency to sacrifice the future for the benefit of the present—within the narrative time. The mythical voice, on the one hand, raises the reader's threshold of belief, and on the other hand, breaks the

cold language of the modern information regime, making nature a narratable and tangible entity.

Character building is also a carrier of sustainability pedagogy. Defne Kaman, the modern Kaman/activist, and Umay Nine, the ancient sage, serve as two focal points staging the reader's ethical transformation. This narrative guides the reader from digital immigration to ecological indigeneity (Uzuner, 2023, p. 369). Furthermore, the idea of ceasing to be the master of nature and becoming a part of it is the novel's goal of value transformation. However, a delicate tension emerges in the relationship between literature and sustainability: the risk of character instrumentalization as the pedagogical goal strengthens. Indeed, while increasing the energy to persuade the reader without directing a thesis, it can sometimes narrow the multiplicity of human typologies; that is, the confinement of consumption-oriented figures to the good-evil dichotomy can sometimes schematize the aesthetic depth of the novel. Nevertheless, in sustainability-themed narratives, this didactic orientation is often a conscious choice. Because the aim is not to multiply grey areas, but to break the reader's ethical inertia.

Uzuner's Nature Tetralogy addresses sustainability through three fundamental capacities of literature: (i) conceptualisation (transforming elements into ethical pillars), (ii) generating emotion and empathy (interspecies connection), and (iii) establishing public debate (critique of institutions, energy regimes, ecocide, and justice). The tetralogy reads the environmental crisis not as a loss of nature, but as a crisis of justice, law, and the self-concept of humanity. The line of protest, beginning with the question, "*why... hydroelectric power plants in place of streams...*", culminates in a horizon of accountability with the sentence, "*ecocide... a crime committed against all humanity.*" This progression defines the series' unique place within sustainability literature. Uzuner invites the reader to view nature not with romantic admiration, but with a sense of ethical responsibility and social solidarity.

5 CONCLUSION

This study, through a holistic reading of Buket Uzuner's Nature Tetralogy (Water, Earth, Air, Fire) within an ecocritical theoretical framework, reaches significant conclusions regarding how environmental awareness is constructed in contemporary

Turkish novels, how it is transformed into an ethical realm through various narrative strategies, and how it circulates sustainability discussions on a pluralistic basis. The study reveals that environmental crises are not treated as a decorative backdrop in the novels, but rather as a constitutive narrative dynamic carrying ethical, political, social, and pedagogical tensions simultaneously.

One of the tetralogy's most powerful contributions is its creation of a narrative structure that questions the anthropocentric worldview. Nature ceases to be an object reduced to a resource logic and becomes a realm of existence with essential value, understood through relationality, and capable of exerting influence. The symbolic framework developed around the water-earth-air-fire axis, instead of presenting nature as a silent and passive stage, functionalizes it as an agent that reacts to, resists, and transforms the consequences of human actions. This approach opens up a critical reading space that forces the reader to rethink the hierarchies produced by the human-nature duality and creates a worldview based on interspecies commonality.

Secondly, it is determined that in the tetralogy, ecofeminist sensibility is articulated through indigenous/local knowledge systems, rituals, intergenerational memory transmission, and cultural continuity channels. This articulation produces a perspective that does not narrow sustainability down to a technical management problem; rather, it considers cultural heritage, social memory, and intergenerational ethical responsibility dimensions together. Defne Kaman's position within the narrative does not pit traditional ecological knowledge and the cosmological perspective against the contemporary scientific ecological discourse, but rather places them in a dialogue that complements and deepens them. Thus, hierarchical orders among knowledge sources are questioned, and the legitimacy of multiple epistemologies is incorporated into the narrative logic of the novel.

Thirdly, it has been observed that dystopian imagination, irony, grotesque imagery, and satirical tone play a decisive role in depicting the institutional and economic determinants behind environmental destruction in novels. State institutions, corporations, and the logic of neoliberal development are not excluded from environmental destruction; rather, their relationships of responsibility are revealed within the narrative through concrete plot elements and character experiences. This critical framework produces a sense of justice that suggests the unequal distribution of ecological risks and the

disproportionate burden placed on vulnerable groups. Therefore, it elevates the discourse of environmental crisis from an abstract global level to the realm of everyday life. Ultimately, the reader is drawn into a realm of proximity where they can comprehend crises both as information and at the level of experience and emotion.

However, it is also noted that the emphasis on sustainability, in some sections, produces a didactic intensity that occasionally strains the narrative flow. Long explanatory dialogues and a tendency to convey direct messages create a tense line between aesthetic autonomy and a desire for public intervention. Yet, this tension appears consistent with the texts' positioning within the context of climate fiction and the author's choices to establish literature as a socially responsible field of expression. Therefore, the risk of didacticism should be considered not only as a formal flaw but also as a side effect of a genre-specific and ethical choice.

In conclusion, this study illustrates that the Nature Tetralogy produces an internalised ecological awareness through narrative proximity, character identification, and emotional resonance, without confining environmental crises to the limits of cognitive knowledge. This finding indicates that ecocritical analyses should not remain at the textual-thematic level; they should be advanced along an interdisciplinary path enriched with reader-response approaches, cognitive narratology, and ecological identity theories. Future studies that examine the perceptual, emotional, and behavioural effects of these texts on different reader groups using qualitative and mixed methods will make a concrete contribution to mapping the ecocritical repertoire in Turkish literature, more clearly defining the common points between local narrative traditions and global ecological discourses and increasing the theoretical depth of the field.

REFERENCES

- Ağır, B. (2023). Environmental Crisis in Urban Areas in J. G. Ballard's Short Stories. *Selçuk Üniversitesi Edebiyat Fakültesi Dergisi*, 49, 15–26. <https://doi.org/10.21497/sefad.1313153>
- Alonso, G., Cohen, G., Medici, M., Steinlage, M., & UNESCO (Eds). (2014). *UNESCO Culture for Development Indicators: Methodology manual*. UNESCO.

- Bartosch, R., & Hoydis, J. (2025). Climate Fiction as Future-Making: Narrative and Cultural Modelling Beyond Representation. *Future Humanities*, 3(1), e70008. <https://doi.org/10.1002/fhu2.70008>
- Başaran, G. (2007). Bellek Yönetimi ve Edebiyat: Türk Ulusal Kimliğinin İnşası ve Tarihi Romanlar. *Kültür ve İletişim*, 10 (2)(20), 63–90.
- Bhagwanji, Y., & Born, P. (2018). Use of Children’s Literature to Support an Emerging Curriculum Model of Education for Sustainable Development for Young Learners. *Journal of Education for Sustainable Development*, 12(2), 85–102. <https://doi.org/10.1177/0973408218785320>
- Bhola, H. S. (1990). *Evaluating ‘literacy for development’ projects, programs, and campaigns: Evaluation planning, design and implementation, and utilization of evaluation results*. Unesco Institute for Education.
- Buell, L. (2001). *Writing for an endangered world: Literature, culture, and environment in the U.S. and beyond*. Belknap Press of Harvard University Press.
- Dahlstrom, M. F., & Scheufele, D. A. (2018). (Escaping) the paradox of scientific storytelling. *PLOS Biology*, 16(10), e2006720. <https://doi.org/10.1371/journal.pbio.2006720>
- Down, L. (2006). Addressing the challenges of mainstreaming education for sustainable development in higher education. *International Journal of Sustainability in Higher Education*, 7(4), 390–399. <https://doi.org/10.1108/14676370610702190>
- Encabo-Fernández, E., Maestre-Espinosa, M., Jerez-Martínez, I., & Hernández-Delgado, L. (2023). Sustainable Teacher Training and SDGs Knowledge: A Study from the Reading Perspective. *Education Sciences*, 13(7), 663. <https://doi.org/10.3390/educsci13070663>
- European Commission. Directorate General for Environment. (2021). *The state of nature in the EU: Conservation status and trends of species and habitats protected by the EU nature directives 2013–2018*. Publications Office. <https://data.europa.eu/doi/10.2779/928382>
- European Commission. Joint Research Centre. (2025). *Global energy and climate outlook 2024: Updating NDCs and closing the ambition gap : indicators for 1.5°C alignment*. Publications Office. <https://data.europa.eu/doi/10.2760/9028706>
- European Commission. Statistical Office of the European Union. (2025). *Sustainable development in the European Union : monitoring report on progress towards the SDGs in an EU context: 2025 edition*. Publications Office. <https://data.europa.eu/doi/10.2785/8386424>
- European Environment Agency. (2022). *Energy prosumers in Europe: Citizen participation in the energy transition*. Publications Office. <https://data.europa.eu/doi/10.2800/030218>

- Filutowska, K. (2023). Social Imaginary of the Just World: Narrative Ethics and Truth-Telling in Non-Fiction Stories of (In)Justice. *Pro-Fil*, 24(2). <https://doi.org/10.5817/pf23-2-36882>
- Goga, N., & Pujol-Valls, M. (2020). Ecocritical Engagement with Picturebook through Literature Conversations about Beatrice Alemagne's On a Magical Do-Nothing Day. *Sustainability*, 12(18), 7653. <https://doi.org/10.3390/su12187653>
- Guanio-Uluru, L. (2019). Education for Sustainability: Developing Ecocritical Literature Circles in the Student Teacher Classroom. *Discourse and Communication for Sustainable Education*, 10(1), 5–19. <https://doi.org/10.2478/dcse-2019-0002>
- Heggernes, S. L. (2021). A critical review of the role of texts in fostering Intercultural Communicative competence in the English Language classroom. *Educational Research Review*, 33, 100390. <https://doi.org/10.1016/j.edurev.2021.100390>
- Heise, U. K. (2008). Ecocriticism and the Transnational Turn in American Studies. *American Literary History*, 20(1–2), 381–404. <https://doi.org/10.1093/alh/ajm055>
- Heise, U. K. (2016). *Imagining Extinction: The Cultural Meanings of Endangered Species*. University of Chicago Press. <https://doi.org/10.7208/chicago/9780226358338.001.0001>
- Horlacher, P. (2025). *Narrative Matters: Investigating the Effects of Sustainability Storytelling in Tourism Destinations* [Master's Thesis, Upsala Universitet]. <https://www.diva-portal.org/smash/get/diva2%3A1969382/FULLTEXT01.pdf>
- Huber, K., & Rodoreda, G. (2024). Narrating Loss in James Bradley's 'Clade' (2015); or, Introducing Arrested Narrative in Climate Fiction. *Ecozon@: European Journal of Literature, Culture and Environment*, 15(1), 143–157. <https://doi.org/10.37536/ECOZONA.2024.15.1.5072>
- Karatay, H. (n.d.). Eleştirel Düşünme ve Okuma alışkanlığı becerilerinin geliştirilmesi İçin edebiyat halkası: Kitap eleştirisi modeli. *Milli Eğitim Dergisi*, 45(208), 6–17.
- Kioupi, V., & Voulvoulis, N. (2019). Education for Sustainable Development: A Systemic Framework for Connecting the SDGs to Educational Outcomes. *Sustainability*, 11(21), 6104. <https://doi.org/10.3390/su11216104>
- Lin, C.-I., & Li, Y.-Y. (2024). Empowering undergraduate students to take action: An empathetic mindset toward education for sustainable development. *International Journal of Sustainability in Higher Education*, 25(4), 708–727. <https://doi.org/10.1108/IJSHE-07-2021-0319>
- Mackenthun, G. (2021). Sustainable Stories: Managing Climate Change with Literature. *Sustainability*, 13(7), 4049. <https://doi.org/10.3390/su13074049>

- Meisch, S. P. (2019). I Want to Tell You a Story: How Narrative Water Ethics Contributes to Re-theorizing Water Politics. *Water*, 11(4), 631. <https://doi.org/10.3390/w11040631>
- Mensah, J. (2019). Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review. *Cogent Social Sciences*, 5(1), 1653531. <https://doi.org/10.1080/23311886.2019.1653531>
- Mercer, S., Correia Ibrahim, N., Bilsborough, K., Jones, C., & Potzinger, C. (2023). Teacher perspectives on addressing environmental issues in ELT. *ELT Journal*, 77(4), 393–406. <https://doi.org/10.1093/elt/ccac039>
- Merritt, E., Hale, A., & Archambault, L. (2018). Changes in Pre-Service Teachers' Values, Sense of Agency, Motivation and Consumption Practices: A Case Study of an Education for Sustainability Course. *Sustainability*, 11(1), 155. <https://doi.org/10.3390/su11010155>
- Morton, S., Pencheon, D., & Squires, N. (2017). Sustainable Development Goals (SDGs), and their implementation. *British Medical Bulletin*, 1–10. <https://doi.org/10.1093/bmb/ldx031>
- Myren-Svelstad, P. E. (2020). Sustainable Literary Competence: Connecting Literature Education to Education for Sustainability. *Humanities*, 9(4), 141. <https://doi.org/10.3390/h9040141>
- Nakano, Y., & Hondo, H. (2023). Narrative or Logical? The Effects of Information Format on Pro-Environmental Behavior. *Sustainability*, 15(2), 1354. <https://doi.org/10.3390/su15021354>
- Nixon, R. (2013). *Slow violence and the environmentalism of the poor* (First Harvard University Press paperback edition). Harvard University Press.
- René Wellek and Austin Warren. (1949). *Theory of Literature*. <https://dn790007.ca.archive.org/0/items/theoryofliteratu00inwell/theoryofliteratu00inwell.pdf>
- Schneider-Mayerson, M. (2018a). The Influence of Climate Fiction. *Environmental Humanities*, 10(2), 473–500. <https://doi.org/10.1215/22011919-7156848>
- Schneider-Mayerson, M. (2018b). The Influence of Climate Fiction. *Environmental Humanities*, 10(2), 473–500. <https://doi.org/10.1215/22011919-7156848>
- Summers, D., & Cutting, R. (Eds). (2016). *Education for Sustainable Development in Further Education*. Palgrave Macmillan UK. <https://doi.org/10.1057/978-1-137-51911-5>
- Sustainable development in the European Union – Monitoring report on progress towards the SDGs in an EU context – 2025 edition*. (2025). <https://ec.europa.eu/eurostat/web/products-flagship-publications/w/ks-01-24-018>

- UNESCO. (2017). *Education for Sustainable Development Goals: Learning objectives*. UNESCO. <https://doi.org/10.54675/CGBA9153>
- UNESCO. (2018). *Issues and trends in education for sustainable development*. UNESCO. <https://doi.org/10.54675/YELO2332>
- UNESCO. (2020). *Education for sustainable development: A roadmap*. UNESCO. <https://doi.org/10.54675/YFRE1448>
- United Nations. (2015). *The Millennium Development Goals Report 2015*. [https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf)
- Uzuner, B. (2023). *Ateş / Uyumsuz Defne Kaman'ın Maceraları*. Everest Yayınları.
- Uzuner, B. (2025a). *Hava / Uyumsuz Defne Kaman'ın Maceraları*. Everest Yayınları.
- Uzuner, B. (2025b). *Su / Uyumsuz Defne Kaman'ın Maceraları*. Everest Yayınları.
- Uzuner, B. (2025c). *Toprak / Uyumsuz Defne Kaman'ın Maceraları*. Everest Yayınları.
- Voulvoulis, N., Arpon, K. D., & Giakoumis, T. (2017). The EU Water Framework Directive: From great expectations to problems with implementation. *Science of The Total Environment*, 575, 358–366. <https://doi.org/10.1016/j.scitotenv.2016.09.228>
- What is Sustainability? (2015). *Alternatives Journal*, 41(1), 16–16.
- Wood, N. (2022). Realism in Eco Fiction: Climate change and the short story cycle. *Social Alternatives*, 41(3), 43–47.

Authors' Contribution

All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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