

Wetlands in the Anthropocene: An Ecolinguistic Study of Framing and Metaphors in *National Wetland Policies*

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Abstract

The volatile state of wetlands in the anthropocentric era has been regarded as a major environmental threat to man and animal life. Wetlands are basically vast areas, periodically submerged in shallow water which support crucial ecological activities essential for sustaining biodiversity. However, in the anthropocentric era, the cumulative impact of harmful human activities poses an unprecedented threat to these ecosystems. One of the policy documents which addresses such threats by calling for a collective effort to slow wetland degradation is the *Ramsar's Handbook on National Wetland Policy* (4th edition, 2010). This study critically examines the linguistic strategies of framing and metaphor as used in the policy document. To achieve this objective, a qualitative content analysis was adopted to identify and analyze metaphors and frames, and analyze the underlying meanings, patterns and implications. The study focused on the entire 64-page policy document which was obtained in PDF format from the official environmental agency websites to ensure authenticity. A purposive sampling technique was used to select pages of sections from the document. The analysis was anchored on Stibbe's (2015) Framework of Frames and Metaphors, which focuses on identifying how language construct meaning and influences attitudes toward ecological issues. The finding revealed that the policy document effectively employs frames and metaphors to convey the significance of wetlands and motivate action against degradation. The findings reveal that certain linguistic texts in ecological discourses not only shape perceptions but also drive societal engagement. Eco-linguistic studies help to highlight the role of language in shaping ecological discourses and demonstrating how meaning is conveyed in language especially within policy documents.

Keywords: Wetlands, Ecolinguistics, Anthropocene, Framing, Metaphor

Introduction

In every human activity, language is used to construct meaning in social interaction. As Yule (2022) puts, it “serves as a type of communication system that can be observed in a variety of different situations”. Lyons (1968) suggests that one important property of language is its use as “medium transferability”. Invariably, language functions as a vital tool for transferring information between individuals or groups of individuals. Beyond mere communication, it plays a crucial role in constructing belief systems, developing ideologies, generating ideas, and disseminating these concepts in ways that can reshape worldviews. Consequently, language shapes ideologies, particularly in relation to environmental preservation. Over time, human

behaviours have prompted the study of the intersection between language and the environment, giving rise to Ecolinguistics. Ecolinguistics is a recent field that encompasses the different aspects of other disciplines such as Anthropology, Sociology, Ecology, and Environment.

Wetlands and Anthropocene in Ecolinguistics are two important concepts in this study. Wetlands are a critical part of the natural ecology which plays a crucial role in the ecosystem by providing a significant number of resources that are beneficial for man and animals alike. Their importance cannot be overemphasized as they help in water purification, flood control, habitat preservation and shoreline stabilization. However, the current geological period, the Anthropocene, is marked by significant human impact on Earth's ecosystems. The Anthropocene is shaped by extensive pollution, climate change, and land use changes which have led to the rapidly degrading of wetlands (Steffen et al., 2015). Simply put, Anthropocene is the era of degradation of the environment which is essentially the result of human-driven activities to industrialize every sector, and the resultant effect becomes pollution, ecosystem disruption, habitat loss, and the depletion of vital resources such as soil, water, and clean air. (Ndehedehe, 2023) describes the Anthropocene as “a new era characterized by rapid changes in the environment driven largely by human activities and global climate change” (p.6). These changes not only affect the wetlands but also other important areas of the earth's surface that play the role of biodiversity and climate regulation. Wetlands have been known to maintain a symbiotic relationship with humans and the environment over a long period, providing invaluable ecological balance but this has been greatly exploited, hence the need for policies to prevent further damage.

This understanding of how human activities shape wetland ecosystems has necessitated the rise of policies developed to promote sustainable use and managerial practices on the wetlands. Such policies include, *National Conservation Strategy and Policy Statement on Environmental and Development* (1992), *National Wetland Policy and Strategy* (2006), and the *Ramsar Convention Policies* (2013)” etc. which are geared towards addressing human impacts on the environment by framing wetlands as vital ecosystems that require protection using language to reflect such ecological importance. Santra (2017) itemizes the key objectives of these policies to include: integrating wetland conservation within broader cross-sectorial national planning, demonstrating government commitment to restoring and sustaining wetlands, maintaining biological diversity and ecological integrity, ensuring local community benefits, and halting the conversion of wetlands for other land uses or practices that alter their ecological functions, processes, or characteristics.

Interestingly, the language used in wetland conservation policies often employs frames and metaphors. This study is motivated by the need to understand how the *Ramsar Handbook for National Wetland Policy* (4th edition) (2010) uses language, particularly metaphors and frames, to influence stakeholders. In other words, this study analyses the use of metaphors and frames, so as to uncover how they influence the construction of environmental narratives, and how they enhance effectiveness in the communication of ideas in the policy document.

The main aim of this study is to critically examine the use of frames and metaphors in *Ramsar Handbook for National Wetland Policies (4th Edition)* (2010). Therefore, the research has the following objectives:

- i. to identify instances of frames in the text;
- ii. to examine the metaphors employed in the text and their influence on perceptions of wetlands; and
- iii. to evaluate the linguistic effect of these frames and metaphors in promoting sustainable wetland management practices.

Literature Review

Wetlands and Anthropocene are very significant concepts in this study. Wetlands are among the most productive ecosystems on earth which provide services like carbon sequestration, biodiversity preservation, and natural disaster mitigation (Mitsch and Gosselink, 2015; Glas, 2022). Wetlands occupy a significant area of the earth's surface and are characterized by a unique vegetation of grasses, a variety of lush plants, and diverse animal species. Santra (2017) describes the wetlands as "areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions". In the words of Courouble et al (2021), these sort of ecosystems, presented as marshes, swamps, lagoons, etc. "provide essential ecosystem services which contribute to people's livelihood through purification of water, flood control, and a habitat for different species".

Crutzen and Stoermer (2000) popularise the 'Anthropocene' when they described it as the era when human activities like industrialization and deforestation have become the dominant force shaping the environment. The era is characterised by the dominant influence of human activities that resulted in biodiversity and climate change. The resultant effect of global climate change, the surge in the rise of ocean levels, population outbursts, and energy use, gave birth to the Anthropocene era. This new period is marked by rising global temperatures, ocean level surges, population expansion, and greater energy use (Waters et al, 2016). These activities have led to habitat loss, the extinction of species and a rapid decrease in biodiversity, all of which have all contributed to the instability of ecosystems throughout the world (Zalasiewicz et al., 2011).

Frames and metaphors are powerful tools in policy communication. They are used to shape how issues are understood and acted upon. A frame organizes information and presents it in a way that highlights certain aspects while downplaying others (Lakoff, 2010). In the words of Dryzel (2013), while frames are effective tools for communication, they are not without criticism. Frames can oversimplify complex issues, exclude alternative perspectives and create biases. For instance, the overuse of economic frames in conservation might sideline intrinsic ecological and cultural values

The study is housed in Ecolinguistics, an interdisciplinary field that explores how language reflects, shapes, and influences human interactions with the environment. Central to ecolinguistics is the understanding that linguistic expressions do more than describe the world; they actively construct perceptions of ecological systems (Fill and Penz, 2018). Frames, metaphors, and narratives embedded in language can promote environmental awareness or perpetuate harmful practices. For example, framing wetlands as "wastelands" versus "life-support systems" evokes vastly different attitudes and actions toward their conservation. Stibbe's framework emphasizes uncovering these linguistic patterns to foster sustainability by

encouraging narratives that promote ecological harmony. Ecolinguistics, as explained by Bang and Trampe (2014), encompasses two major aspects “on one hand traditional linguistics methods applied on texts and discourse of ecological importance and on the other hand, deeper reflections on the theories of language inspired by the holistic paradigm of ecology.

Several scholars have written similar research to the present one. McNenny’s (2018) work titled: “*Framing the Anthropocene: Educating for Sustainability*”, examined the frames and rhetorics surrounding the use of the term the Anthropocene and their implications for sustainability education across several disciplines. Through the use of Ecolinguistics and Critical Discourse Analysis, the study analysed how framing of the Anthropocene provides a critical tool for examining interpretations and approaches to what it means to be in the midst of an epoch in which humankind’s impact on the planet merits a new geologic time frame. Similarly, Lakoff (2010) explored how frames influence political and environmental discourse, and how framing impacts public perception and policy decisions. The main research questions were: How do frames shape understanding and behavior in political and environmental contexts? Lakoff employed a qualitative analysis of political speeches, policy documents, and media texts to identify recurring frames and metaphors. His focus was on understanding the cognitive structures underlying communication strategies. Texts were analyzed for linguistic patterns, metaphors, and framing devices, and most importantly, how these influenced audience perceptions and actions. The result of the findings showed that frames, such as “protection” in environmental discourse, strongly shape public and political responses to ecological issues.

The study found that framing wetlands as “critical ecosystems” encourages preservation while framing them as “underutilized resources” promotes exploitation. The researcher therefore recommended that environmental communicators should carefully craft frames that will align with values like sustainability and ecological balance in order to ensure effective persuasion. Similarly, Nisbet (2009) sought to examine the role of frames in shaping public engagement with climate change. The key question was: What types of frames are most effective in engaging the public on climate change issues? Nisbet conducted a content analysis of climate change communication which included media coverage, policy documents, and public awareness campaigns. The study also surveyed public responses to different framings of climate change. Texts were coded to identify dominant frames, such as “*scientific consensus*,” “*economic opportunity*,” or “*moral responsibility*.” Survey results were analyzed to correlate specific frames with levels of public engagement. Results showed that frames that emphasise moral responsibility and economic opportunity were found to be more effective at engaging diverse audiences than frames relying solely on scientific data or fear appeals. The study also discussed the importance of cultural relevance in framing climate issues. Recommendations were solely on tailoring frames to meet audience values and priorities i.e. emphasizing local economic benefits or ethical responsibilities to future generations in order to foster meaningful engagement with environmental challenges.

Theoretical Framework

This research is anchored on Stibbe’s (2015) Theory of Frames and Metaphors, within the context of Ecolinguistics. Stibbe’s work offers a robust theoretical perspective for identifying

instances of frames and metaphors, and how they shape human perceptions of environmental issues and actions toward ecological sustainability.

Frame Theory

Frame theory according to Stibbe (2015: 27) is “a story about an area of life that is brought to mind by particular trigger words”. He explains that framing occurs “when a frame is employed to structure a particular area of life, and occurs when a trigger word is used in describing that area. It is the cognitive imposition of a package of knowledge from one area of life onto another area” (Stibbe, 2015: 41). Framing is present in various discourses as a cognitive device for conceptualising issues. (Lakoff, 2014) defines the frames as “mental structures that shape how we see the world. As a result, they shape the goals we seek, the plans we make, the way we act, and what counts as a good or bad outcome of our actions (p. xi)”.

In framing issues, specific keywords are used to evoke a particular frame which Stibbe (2015: 41) refers to as ‘trigger words’, and what Dewulf et al. (2009) refer to as “mindsets or mental filters (p. 157). According to Lakoff (2014), these words can be strategically selected to activate desired frames that guide public perception and interpretation of environmental issues. In essence, words evoke frames, as Stibbe (2015: 17) concludes “...words bring specific distinct frame to mind”.

The *Ramsar’s Handbook on National Wetland Policy* (4th edition) (2010) provides critical opportunities to explore and change the ideology across different geographical settings, with a specific focus on highlighting the danger of harmful and unsustainable practices. The policy’s framing aims at redirecting public attention to the importance of sustainability of the earth’s environment and the need to preserve it. From an Ecolinguistics perspective, Stibbe (2015) accentuates that “frames and framing are in common use, to find problems with them from an ecological perspective, and search for alternative framings that can encourage people to protect the ecosystems that life depends on.” Leaders and policymakers use framing as a powerful tool to influence the orientation of members of the public. This theoretical background emphasizes the role of language in shaping perception, enabling behavioural change in stakeholders of the environment, and making a central tool for understanding how discourse, particularly in environmental contexts, influences thought and action.

Metaphor

Metaphor, according to Stibbe (2021: 59), “works in the same way as framing, but it is a special type of framing since the source frame belongs to a specific and clearly different area of life – often one that we are familiar with from everyday interaction.” The role of metaphor and cognitive experience cannot be isolated from linguistic analysis and cannot be separated from the process of meaning-making. Metaphor as a tool for the analysis of this study is defined by Mey (2006) as “the central role played in our perception and cognitive processes”, stating categorically that it is “not an individual means of conceptually dealing with the world, but means that have become current within a given linguistic and cultural community. (p. 302)”. As a concept, Stibbe(2015) describes metaphor “as cognitive structures, existing in people’s minds and influencing how they see the world” (p. 16). It resides not only in a language but also in the mind, metaphors are used not only to speak about certain aspects of the world but

also to think about them. As Lakoff (2010: 73) explains, it uses a more tangible concept or object to describe abstract ideas that help to shape understanding as a linguistic expression for which Stibbe (2021) calls the *source frame* to be the intended meaning as the *target frame*.

Methodology

This study adopts a qualitative content analysis to critically examine the 64 pages of the *Ramsar Handbook for National Wetland Policy* (4th Edition). This text was downloaded online in PDF from the Environmental Agency Websites to ensure authenticity and official status of the text. The purposive sampling method was used to select the first section of the text (pages 9–26) for analysis, as they contain foundational concepts, key definitions, and guiding principles for wetland policies. The analysis applied Stibbe's (2015) Framework of Frames and Metaphors, which focuses on identifying the ways language is used to shape understanding and attitudes. The analysis involved identifying instances of frames and metaphors; and exploring the broader implications and linguistic effect of frames and metaphors in the text.

Data Presentation and Analysis

Wetlands as Frames in the Text

1) Wetlands as “Life-Support Systems”

Excerpt 1: “Wetlands have been identified as one of the key life support systems on this planet in concert with agricultural lands and forests” (Section 1.1, Lines 1–2).

Analysis

The above excerpt strategically frames wetlands by emphasising its fundamental role in maintaining the Earth's ecological balance equating them with essential systems in the society such as agriculture and forestry. The linguistic choices stress the integral role of wetlands in sustaining biodiversity. In addition, labelling wetlands as a “*life-support system*,” conveys their indispensable ecological need and encourages policymakers and stakeholders to prioritize their protection. This frame highlights their role in sustaining life, thereby encouraging policymakers and stakeholders to prioritize wetland conservation and integrate their protection into broader environmental management strategies. The language employed, not only emphasises the significance of wetlands but also serves as a rhetorical tool to influence environmental discourse and policy formulation.

2) Wetland Degradation is framed as a “Costly Disruption”

Excerpt 2: “The disruption of wetland functions has a high cost – economically, socially, and ecologically” (Section 1.1, Lines 19–20).

Analysis

This excerpt highlights the multidimensional consequences of wetland's loss by categorizing it across economic, social and ecological dimension. This portrayal serves to motivate action by appealing to both rational cost-benefit considerations and a sense of ecological responsibility.

Linguistic choices used in this excerpt appeals to one's ecological responsibility by mirroring the 'disruption' and fostering a heightened awareness of environmental stewardship.

3) Wetlands as "Economic Engines"

Excerpt 3: *"Wetlands support substantial tourism and recreational opportunities, such as hunting, fishing, bird watching, and nature photography"* (Section 1.1, Lines 30–31).

Analysis

This frame positions wetlands as valuable economic resources that contribute to local and national economies. Invariably, a treasure that needs to be preserved. It appeals to stakeholders who may prioritize financial incentives and underscores the tangible benefits of conservation.

4) Policy Development as a "Golden Opportunity"

Excerpt 4: *"Development of such a Policy is in fact a 'golden opportunity' to promote cooperation and action at many levels"* (Section 1.1, Line 42).

Analysis

This metaphorical frame transforms policy-making into a chance for impactful change. By likening it to a "golden opportunity," the text inspires optimism and a sense of urgency, encouraging collaborative efforts.

5) Wetlands as "Underutilized Resources"

Excerpt 5: *"A major portion of the wetland area in settled areas has been converted...to support alternative land uses including agriculture, urbanization, industry, and recreational pursuits"* (Section 1.1, Lines 16–17).

Analysis

While this frame recognizes the economic potential of wetlands, it also hints at their exploitation. This dual framing allows for nuanced interpretations, appealing to those who value economic development but also emphasizing the need for sustainable management.

Wetlands as Metaphors in the Text

1) Wetlands as "Earth's Kidneys"

Excerpt 6: Though not explicitly stated, wetlands are described as systems that *"improve water quality... and recharge groundwater supply"* (Section 1.1, Lines 25–27).

Analysis

The metaphor of wetlands as "Earth's kidneys" resonates strongly, emphasizing their cleansing and regulating functions. It simplifies complex ecological processes into relatable terms, making their importance easier to grasp.

2) Policy as a “Framework”

Excerpt 7: “A National Wetland Policy will function as a framework that enables clear conclusions to be drawn about what actions are required...” (Section 1.5, Lines 52–53).

Analysis

This metaphor likens policy to a structural foundation, highlighting its role in organizing and guiding action. It conveys the idea of stability, structure, and clarity, fostering confidence in its utility.

3) The "Wise Use" Principle

Excerpt 8: “The Wise Use concept has become a hallmark of the Convention on Wetlands” (Section 1.3, Line 1).

Analysis

This metaphor frames sustainable wetland management as an intelligent and strategic approach. By branding conservation as “wise,” the text appeals to logic and positions sustainability as the only rational choice.

4) Wetlands as "Nurseries"

Excerpt 9: “...as spawning and nursery grounds for fish...” (Section 1.1, Line 28).

Analysis

As a metaphor, this line emphasises the nurturing role of wetlands, particularly for aquatic life. It evokes an image of care and growth, making the ecological role of wetlands more tangible and emotionally compelling.

5) Policy as a "Tool"

Excerpt 10: “A National Wetland Policy is one tool in the spectrum of actions proposed in the Guidelines...” (Section 1.7, Line 1).

Analysis

Comparing policy to a tool suggests its practicality and utility. This metaphor frames policy as a means to an end, emphasizing its role in achieving specific conservation objectives.

Discussion of Findings

The findings of this study are discussed in line with the research questions and are further examined in the context of existing literature on wetland conservation and policy language. The analysis aims to establish points of convergence and divergence from previous research on the linguistic framing and environmental policies.

The analysis revealed that wetlands are framed in multiple ways, emphasizing their ecological, economic, and social significance. For instance, the life-support system frame portrays wetlands as vital ecosystems integral to the survival of the planet’s biodiversity and human well-being (**Section 1.1, Lines 1–2**). The economic frame underscores their value in

sectors such as tourism, fisheries, and agriculture (**Section 1.1, Lines 30–31**), while the ‘wise use’ frame advocates for a balanced approach that integrates conservation with sustainable utilization (**Section 1.3, Line 1**). These findings align with Nisbet’s (2009) assertion that strategic frames are effective in engaging diverse stakeholders in environmental conservation. However, the analysis reflects Lakoff’s (2010) concerns that economic framing, while compelling, may risk overshadowing intrinsic ecological values if not complemented by ecocentric perspectives.

In addition, the findings also revealed that, metaphors in the text serve to simplify complex ecological processes and making them more comprehensible and relatable. For instance, wetlands are metaphorically presented as “**Earth’s kidneys**,” emphasizing their role in filtering and purifying water (**Section 1.1, Lines 25–27**). Additionally, the metaphor of wetlands as “**nurseries**” illustrates their nurturing function as habitats for aquatic and terrestrial species (Section 1.1, Line 28).

Furthermore, the policy itself is metaphorically described as a “**framework**” and a “**tool**”, underscoring its function in structuring and facilitating conservation efforts (Section 1.5, Lines 52–53). These findings support Thibodeau and Boroditsky’s (2011) conclusion that metaphors are powerful in guiding reasoning and decision-making, particularly in environmental discourse. By portraying wetlands to ‘life-sustaining systems’, the text fosters a deeper appreciation for their importance and echoes the sentiments in Dryzek’s (2013) work on effective environmental narratives.

Moreover, the study highlights the synergistic role of framing and metaphors in promoting sustainable environmental practices. The *life-support system* frame reinforces the necessity of wetland conservation for global ecological stability, while the *wise use* frame ensures that resource utilization is aligned with conservation principles (**Section 1.3, Line 1**). Similarly, metaphors like “**Earth’s kidneys**” render the importance of wetland preservation more tangible, appealing to both technical and non-technical audiences. These linguistic strategies collectively contribute to a discourse that highlights the interconnectedness of ecological, economic, and social systems, ultimately advocating for sustainable wetland management.

Conclusion

The text effectively uses Stibbe’s frames and metaphors to convey the importance of wetlands and how linguistic items inspire actions. By framing wetlands as life-support systems, nurseries, and economic assets, and by employing metaphors like “**Earth’s kidneys**” and “**frameworks**,” the document crafts a narrative that is both scientifically grounded and emotionally resonant. These linguistic tools not only shape perceptions but also drive engagement, making the handbook a compelling call to action for wetland conservation.

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