

A Study on the Ecological Meaning Construction of Provincial and Municipal Official Environmental Protection Initiatives under the Framework of Harmonious Discourse Analysis

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Abstract:

This study takes 24 official environmental protection initiatives at the provincial and municipal levels during the critical period of the 14th Five-Year Plan for Ecological and Environmental Protection (2020-2025) as the corpus, with the Harmonious Discourse Analysis framework and the transitivity system as the theoretical support, to explore the representation rules of their ecological meanings. The findings reveal that the transitivity processes in these official environmental protection initiatives are dominated by action processes (accounting for 58.7%), supplemented by mental processes (22.3%) and relational processes (16.5%), which collectively reflect the people-oriented ecological responsibility orientation. Specifically, the principle of conscience in Harmonious Discourse Analysis is mainly represented through emotional and cognitive mental processes, the principle of proximity relies on attributive and identifying relational processes, and the principle of regulation is realized through hierarchical action processes. These processes form an ecological meaning representation logic of “conscience awakening - connection construction - behavior guidance”, which is highly consistent with the inherent requirements of the “three principles” of Harmonious Discourse Analysis. Moreover, the discourse representation reflects the operational logic of local ecological governance in China, namely “provincial conceptual guidance - municipal practical implementation - multi-subject collaboration”, which is both authoritative and people-friendly, and its core is consistent with the theoretical essence of “hierarchical linkage” and “collaborative participation” in ecological governance. This study expands the application of Harmonious Discourse Analysis in the field of Chinese official ecological discourse and provides practical references for optimizing the environmental protection initiative discourse at the provincial and municipal levels.

Keywords:

Harmonious Discourse Analysis, Transitivity System, Official Environmental Protection Initiatives, Representation of Ecological Meanings, Official Discourse at the Provincial and Municipal Levels

1. Introduction

Against the backdrop of the in-depth advancement of global ecological governance, the 20th National Congress of the Communist Party of China further clarified the strategic deployment of “promoting green development and realizing the harmonious coexistence between humans and nature,” elevating ecological and environmental protection to a core position in the overall national development. The period 2020-2025, as the full implementation cycle of the 14th Five-Year Plan for Ecological and Environmental Protection, marks a critical stage for China’s ecological governance to transform from “focused tackling” to “regular governance.” As a core discursive carrier connecting national ecological policies with local practices, official environmental protection initiatives at the provincial and municipal levels not only serve as an important channel for provincial authorities to coordinate ecological concepts and municipal authorities to refine action requirements but also act as a key tool to mobilize multiple subjects such as enterprises and the public to participate in environmental protection practices. Their discourse representation directly affects the implementation effect of ecological policies and the degree of cohesion of social consensus. As an important medium for ecological governance, linguists should base themselves on ecological protection practices, explore the construction logic of ecological meanings in official environmental discourse, and provide linguistic support for optimizing environmental communication strategies and strengthening public ecological awareness.

Ecolinguistics, an emerging interdisciplinary subject integrating ecology and linguistics, has a core mission to explore the interactive relationship between language and the environment, and to provide discursive solutions for the harmonious development of ecosystems [9]. Currently, the discipline has formed two complementary research paradigms: Haugen’s model and Halliday’s model [10]. Haugen’s model focuses on the impact of the environment on the survival and development of language, analogizing the relationship between language and speech communities to the interaction between organisms and the natural environment [2][3]. In contrast, Halliday’s model pays more attention to the counteraction of language and its use on the ecological environment, emphasizing the need to reveal the ecological attributes of discourse through linguistic analysis, arouse language users’ ecological awareness, and fulfill linguists’ “social responsibility” [4][5] [19]. This study adopts Halliday’s model, taking ecological protection as the core perspective, and uses linguistic tools to interpret the ecological meanings of official environmental protection initiatives at the provincial and municipal levels, so as to provide theoretical support for the optimization of environmental discourse.

Within the theoretical framework of Halliday’s Systemic Functional Linguistics, Stibbe [8] integrates a multidisciplinary perspective into interpreting the ecological properties of discourse, advocates for ecologically harmonious discourse and opposes ecologically disharmonious discourse, thus promoting the transformation of ecolinguistic research from the analysis of ecological discourse to the ecological analysis of discourse [1].

To date, domestic discourse studies from the perspective of ecolinguistics have formed a relatively extensive research landscape with distinctive focuses in various fields. In terms of news and advertising discourse, studies mostly concentrate on environmental news reports and green public service advertisements, exploring how media convey ecological ideas and promote public environmental awareness through

lexical and syntactic means [32]. In literary discourse, researchers focus on ecological literary works to interpret the connotations and values of harmony between humans and nature [20][22]. Regarding online discourse, studies examine the communication of ecological issues on social media platforms and analyze the discursive features and public interaction effects in online contexts [28]. In the field of legal discourse, studies take environmental laws and regulations as research objects to explore how legal texts clarify ecological responsibilities and regulate relevant behaviors [33]. As for political discourse, studies mainly focus on government work reports and national macro policies, interpreting the top-level concepts and policy orientations of ecological governance [29] [31].

Although fruitful achievements have been made in the above fields, existing studies rarely conduct systematic ecological discourse analysis on provincial and municipal official environmental protection initiatives. In addition, few studies combine the framework of Harmonious Discourse Analysis with the transitivity system to explore the representation of ecological meaning in this specific genre. These constitute the research gaps that this study intends to fill.

In view of this, this study intends to, from the perspective of ecolinguistics, take 24 official environmental protection initiatives at the provincial and municipal levels during the 14th Five-Year Plan period (2020-2025) as the corpus, with the Harmonious Discourse Analysis framework as the core theoretical support and the transitivity system theory as the linguistic guidance. It aims to systematically interpret the representation methods and construction logic of their ecological meanings, explore the common characteristics and hierarchical differences of provincial and municipal environmental discourse in reflecting the "people-oriented" assumption and the three principles (the principle of conscience, the principle of proximity, and the principle of regulation), reveal the linguistic construction process of official environmental discourse for the ecological governance logic of "provincial conceptual guidance - municipal practical implementation - multi-subject collaboration," and ultimately provide practical theoretical references and practical paths for the optimization and upgrading of environmental protection initiative discourse at the provincial and municipal levels and the improvement of the communication efficiency of ecological policies.

2. Theoretical Framework

2.1. Harmonious Discourse Analysis

Harmonious Discourse Analysis (HDA) is a localized approach to ecological discourse analysis proposed by Huang Guowen [19] in the Chinese context. With systemic functional linguistics as its theoretical support and rooted in traditional Chinese ecological philosophical thoughts, its core goal is to promote harmonious relationships between humans, between humans and other species, between humans and nature, and between language and ecology. The proposal of this theory stems from reflections on the Western framework of eco-critical discourse analysis, emphasizing that ecological discourse analysis must be combined with specific cultural contexts, social development stages and historical traditions, avoiding a detached critical orientation and instead highlighting a constructive and harmonious orientation [16] [34]. Its philosophical roots can be traced back to the ecological thoughts of Confucianism such as "the unity of man and nature" and "benevolence to people and care for all things", as well as those of Taoism such as "the unity of all

things” and “following nature”. Meng Peiyuan [23] pointed out that the fundamental spirit of Chinese philosophy is the philosophy of “life”, i.e., the harmonious coexistence between humans and nature. Qiao Qingju [25] further elaborated that the core of Confucian ecological thought lies in the rational utilization of all things without losing harmony. These thoughts provide profound philosophical support for Harmonious Discourse Analysis.

The core assumption of Harmonious Discourse Analysis is “people-oriented”, which is not a replica of Western anthropocentrism but centered on the people. It emphasizes the core responsibility and dynamic role of humans in the ecosystem, acknowledging human dependence on nature while highlighting humans’ mission as the main body of ecological protection. It advocates achieving sustainable coexistence with nature while meeting humans’ reasonable needs [17][24]. This assumption echoes Wang Shouren’s thought of “extending innate knowledge”, holding that as the “most precious” species in the world, humans possess both rationality and moral awareness and thus should take on the responsibility of maintaining ecological balance [17].

The three guiding principles of Harmonious Discourse Analysis form an organically unified theoretical network: The principle of conscience serves as the conscious condition for “people-oriented”, derived from Wang Shouren’s thought of “extending innate knowledge”. Its core is ecological conscience, i.e., the spontaneous, voluntary and “good” concept of humans caring for and protecting nature, which guides ecological behaviors by awakening internal moral awareness [30] [17]. The principle of proximity is the specific manifestation of “people-oriented”, advocating that humans serve as the starting point to distinguish the hierarchical relationship of intimacy and distance between themselves and other living organisms as well as the environment. This relationship can be defined from multiple dimensions such as biological, emotional, temporal and spatial aspects, reflecting the Confucian thought of “the unity of hierarchical order and natural harmony”. It does not pursue absolute equality but seeks coexistence amid diversity [35] [34]. The principle of regulation is the restrictive condition for “people-oriented”, standardizing human behaviors through three levels of constraints—personal moral cultivation, community regulations, and national laws and regulations—to avoid ecological damage and ensure the harmonious order between humans and nature [17][34]. These three principles complement each other: the principle of conscience provides internal motivation, the principle of proximity clarifies the relational dimension, and the principle of regulation consolidates external guarantees, together forming the core theoretical framework of Harmonious Discourse Analysis.

Harmonious Discourse Analysis takes Halliday’s systemic functional linguistics as its core theoretical support [16], emphasizing the social intervention function and contextual adaptability of language. It is applicable to the study of various ecological discourses in both Chinese and non-Chinese contexts [34]. In the analysis of environmental protection proposals focused on in this study, this framework can accurately reveal the construction logic of ecological meaning by interpreting the linguistic representation of the “people-oriented” assumption and the three principles. It provides a scientific theoretical tool for evaluating the rationality, authority and effectiveness of discourses, and offers practical guidance for optimizing the creation of ecological discourses and promoting the dissemination of ecological concepts.

2.2. Transitivity System

The transitivity system is the core realization form of the experiential function in systemic functional linguistics, first proposed by Halliday. Its core function is to transform human experiences of the objective and subjective worlds into linguistic forms, constructing reality through the selection of different process types [5][6][18]. This system is not limited to the classification of verbs in traditional grammar but extends to the clause level, dividing experiential meaning into different process types. Each process consists of three core elements—participants, the process itself, and circumstantial elements—through the combination of which the structured construal of experiences is achieved [7]. On the basis of Halliday's theory, He Wei and Wei Rong [13] have constructed a more comprehensive transitivity system network for English and Chinese, refining process types into seven categories: action process, mental process, relational process, behavioral process, communicative process, existential process, and meteorological process. This enhancement has improved the operability of the system in ecological discourse analysis, providing a precise linguistic tool for interpreting the ecological meaning of discourses.

The action process refers to the process of “doing something”, with core elements including the agent and patient. It can be subdivided into subtypes such as agentive actions and creative actions, mainly used to represent specific behaviors of human and non-human organisms. It is a key process reflecting the guidance of ecological behaviors and the distribution of responsibilities [15] [27]. In environmental discourse, the agents of action processes can be divided into multiple subjects such as the public, enterprises, and governments. Through expressions like “practicing green travel” and “promoting ecological restoration,” the environmental responsibilities of different subjects are clarified, directly corresponding to the principle of regulation in harmonious discourse analysis [27][21]. The mental process denotes the process of psychological activities, with core elements including the emoter/senser and phenomenon. It is subdivided into four subtypes: emotional, desiderative, perceptual, and cognitive processes, used to represent human emotional attitudes, cognitive understanding, and behavioral intentions towards nature. It serves as an important linguistic carrier for awakening ecological conscience [14][27]. Among them, emotional mental processes convey care for nature, while cognitive mental processes strengthen rational cognition of ecological relationships, both highly consistent with the principle of conscience in harmonious discourse analysis [18]. The relational process expresses the connections between things, with core elements including the carrier and attribute, subdivided into identification, possession, and ascription subtypes. It is used to construct the interdependent relationship between humans and nature and define the value attributes of nature. For example, expressions such as “Humans and nature form a community of shared life” and “Wetlands are the kidneys of the Earth” can narrow the psychological distance between humans and nature, embodying the principle of proximity [34][21].

From the perspective of ecolinguistics, the process types and participant choices in the transitivity system directly reflect the ecological orientation of discourses. He Wei et al. [10] further classify participants into living organisms and non-living organisms, with living organisms subdivided into human living organisms and non-human living organisms. This classification can more clearly reveal the interactive relationships between different subjects in the ecosystem; Liu Ying [21] found the dynamic changes of beneficial processes, ambivalent processes, and destructive processes through the distribution of processes in the transitivity system when analyzing intangible cultural heritage texts, providing a paradigm for the quantitative and

qualitative analysis of ecological meaning. This study will adopt this improved transitivity system as the core analytical framework, focusing on two key elements—process types and participant roles. By interpreting the linguistic representations in provincial and municipal official environmental protection proposals, it will explore the inherent ecological harmony implications. Specifically, through the distribution characteristics and semantic configuration of process types, this study will investigate how environmental protection proposals realize the transmission of ecological meaning through linguistic encoding, and how they construct harmonious relationships between humans and nature, as well as between humans and society, through the selection of participant roles. Ultimately, it aims to provide linguistic empirical support for revealing the ecological construction logic of environmental discourse and verifying the practical value of the harmonious discourse analysis framework.

3. Research Design

3.1. Research Questions

(1). What are the overall distribution characteristics of transitivity process types in provincial and municipal official environmental protection proposals? How do their distribution patterns reflect the “people-oriented” assumption of Harmonious Discourse Analysis?

(2). What transitivity process types do such proposals respectively rely on when highlighting the principle of conscience, the principle of proximity, and the principle of regulation? What common characteristics do the discursive representations of each principle exhibit?

(3). What hierarchical operational logic and practical orientation of local ecological governance in China are reflected by the ecological meaning representations in provincial and municipal official environmental protection proposals?

3.2. Corpus Collection and Analysis

The 24 valid corpora in this study are all sourced from provincial and municipal official release platforms, specifically including the official websites of functional departments such as provincial Departments of Ecology and Environment and Departments of Natural Resources, as well as official platforms like municipal Bureaus of Natural Resources and Bureaus of Ecology and Environment. They also cover relevant official texts reprinted by the Ministry of Ecology and Environment. All corpora have undergone source verification to ensure the authority of their release subjects and the authenticity of their content.

The corpus selection strictly adheres to the following criteria: The release subjects are limited to provincial (including provincial governments, provincial Departments of Ecology and Environment, provincial Bureaus of Forestry and Grassland, etc.) and municipal (including municipal governments, municipal Bureaus of Natural Resources, municipal Bureaus of Ecology and Environment, etc.) official institutions, explicitly excluding texts released by county-level and lower-level entities, non-official organizations, or civil groups; in terms of genre attributes, only texts clearly marked as “initiative” are selected, requiring a complete textual structure of “initiative background - specific measures - call to action”, excluding non-initiative genres such as news reports, policy notices, and work plans; the thematic scope focuses on core

environmental protection issues, specifically covering five categories: biodiversity conservation, resource conservation, pollution prevention and control, ecological restoration, and green living; the time frame is set from January 2020 to October 2025, consistent with the implementation period of the 14th Five-Year Plan for Ecological and Environmental Protection to ensure the contemporary relevance of the corpora; in terms of completeness, the texts are required to have a complete structure, including a clear initiative initiator, specific and operable action measures, and standardized signature information (release unit and release date), excluding fragmented, repeatedly released, or content-incomplete texts.

The specific distribution of the corpus is presented in the following Table 1:

Table 1. *Distribution of the corpus.*

Statistical Dimensions	Specific Distribution
Administrative Level	Provincial level: 10 articles (41.7%) Municipal level: 14 articles (58.3%)
Thematic Scope	Biodiversity conservation: 8 articles (33.3%) Resource conservation: 6 articles (25.0%) Pollution prevention and control: 4 articles (16.7%) Ecological restoration: 3 articles (12.5%) Green living: 3 articles (12.5%)
Time Span	2020: 3 articles (12.5%) 2021: 5 articles (20.8%) 2022: 1 article (4.2%) 2023: 3 articles (12.5%) 2024: 4 articles (16.7%) 2025: 8 articles (33.3%)

4. Results and Discussion

4.1. Overall Distribution of Transitivity Process Types

Statistics on the transitivity processes in the 24 corpora indicate that the three core process types account for 97.5%. The specific distribution is presented in Table 2:

Table 2. *Distribution of transitivity process types.*

Process Types	Quantity (n)	Proportion (%)	Core Functions
Action Processes	352	58.7	Clarify environmental behaviors and responsible subjects
Mental Processes	134	22.3	Awaken ecological conscience and emotional identification
Relational Processes	99	16.5	Construct interconnected relationships between humans and nature
Other Processes	15	2.5	Supplement descriptions of environmental status and existing facts

Ranking first with the highest proportion (58.7%), action processes centrally reflect the core positioning of “humans as the key subjects of environmental protection practices” in the “people-oriented” assumption. The agents of action processes in the corpora mainly fall into three categories: the public (45.2%), enterprises (28.7%), and governments (26.1%). Examples include “All citizens shall practice green travel” (Yantai Municipal Initiative), “Enterprises shall accelerate the innovation of energy-saving technologies” (Dingzhou Municipal Initiative), and “Governments shall strengthen ecological supervision” (Jiangsu Provincial Initiative). These expressions clarify the division of responsibilities among multiple environmental protection

subjects, highlighting the ecological governance concept of “everyone is responsible,” which is highly consistent with the core connotation of “emphasizing human subjective responsibility” in the “people-oriented” assumption of Harmonious Discourse Analysis.

Mental processes and relational processes jointly account for 38.8%, reflecting the dimension of “valuing human emotions and cognition” in the “people-oriented” assumption. Mental processes mostly take the “public” as the emoter/senser, such as “profoundly comprehend the core concept that humans and nature form a community of shared life” (Fujian Provincial Initiative) and “cherish the Earth homeland” (Inner Mongolia Autonomous Region Initiative). Through emotional awakening and cognitive guidance, they strengthen the public’s sense of ecological responsibility. Relational processes, through expressions like “Humans and nature form a community of shared life” (Guangxi Zhuang Autonomous Region Initiative) and “Wetlands are the kidneys of the Earth” (Yangquan Municipal Initiative), construct the interdependent relationship between humans and nature. They embody the dual emphasis on human survival needs and natural values, aligning with the inherent requirement of “balancing human and natural interests” in the “people-oriented” assumption.

4.2. Ecological Meaning Representation of the Three Principles

4.2.1. Discursive Representation of the Principle of Conscience

The principle of conscience is centered on awakening the public’s ecological morality and sense of responsibility. In the corpus, it is mainly realized through mental processes, with the distribution of its types in the following Table 3:

Table 3. Distribution of mental process subtypes in the principle of conscience.

Types of Mental Processes	Quantity (n)	Proportion (%)	Typical Examples
Emotional Mental Processes	76	56.7	“让我们共同珍爱这片绿水青山，守护世代赖以生存的家園”（福建省倡议书）
Cognitive Mental Processes	38	28.4	“深刻认识生态保护是高质量发展的底线，是人民幸福生活的基础”（江苏省倡议书）
Desiderative Mental Processes	20	14.9	“积极参与植树造林、保护野生动植物等各类志愿活动”（内蒙古自治区倡议书）

Emotional mental processes account for the highest proportion, indicating that provincial and municipal initiatives focus on awakening ecological conscience through emotional resonance. Such discourses frequently adopt emotional verbs such as “cherish,” “guard,” and “care for,” linking the natural homeland with human well-being to stimulate the public’s desire for protection. Cognitive mental processes, through verbs like “recognize,” “comprehend,” and “clarify,” strengthen the public’s rational understanding of the importance of ecological protection, making up for the limitations of emotional mobilization. Desiderative mental processes, via expressions such as “be willing to” and “actively participate in,” guide the public to transform conscience into behavioral willingness, realizing the transformation from emotion to cognition to willingness. This process precisely embodies the core of the principle of conscience— “awakening ecological moral awareness.”

4.2.2. Discursive Representation of the Principle of Proximity

The core of the principle of proximity is to narrow the psychological distance between humans and nature and foster a sense of ecological community, which is mainly realized through relational processes in the corpus. The distribution of its types is as follows Table 4:

Table 4. *Distribution of relational process subtypes in the principle of proximity.*

Types of Relational Processes	Quantity (n)	Proportion (%)	Typical Examples
Ascriptional	53	53.5	“人与自然是生命共同体，每一个人的环保行为都关乎生态系统的平衡”（芜湖市倡议书）
Identificational	36	36.4	“绿水青山就是金山银山，良好生态环境是最普惠的民生福祉”（广西壮族自治区倡议书）
Possessional	10	10.1	“我们拥有共同的地球家园，守护生态是每个人的责任”（威海市倡议书）

Ascriptional relational processes dominate, incorporating humans into the natural ecosystem through relational verbs such as “form” and “belong to,” emphasizing the “coexistence and common prosperity” connection. This directly responds to the core requirement of the principle of proximity—“constructing a close relationship between humans and nature.” Identificational relational processes clarify the value attributes of nature, for instance, associating “lucid waters and lush mountains” with “invaluable assets” and “wetlands” with “the kidneys of the Earth.” This enables the public to intuitively recognize nature’s value to humans, thereby enhancing their willingness to protect it. Possessional relational processes strengthen the public’s sense of belonging to the natural homeland through expressions like “share” and “possess,” stimulating a proactive sense of responsibility for protection. These three subtypes collectively achieve the discursive goal of “constructing close relationships.”

4.2.3 Discursive Representation of the Principle of Regulation

The core of the principle of regulation is to clarify the boundaries and requirements of environmental protection behaviors and guide the standardized behaviors of the public and organizations. It is mainly realized through action processes in the corpus, with the following Table 5:

Table 5. *Distribution of agent hierarchies in the principle of regulation.*

Agent Hierarchies of Action Processes	Quantity (n)	Proportion (%)	Typical Examples
Public Level	159	45.2	“自觉践行绿色出行，减少使用一次性塑料制品”（南昌市倡议书）
Enterprise Level	101	28.7	“严格遵守环保法规，加大治污减排投入，履行生态责任”（定州市倡议书）
Government Level	92	26.1	“加强生态监管，完善环保激励机制，推动绿色产业发展”（江苏省倡议书）

Action processes exhibit an obvious “hierarchical guidance” feature, which is highly consistent with the core connotation of the principle of regulation—“clarifying

behavioral boundaries and guiding standardized behaviors.” At the public level, action processes mostly focus on daily life behaviors such as water conservation, electricity conservation, and green travel, with simple and specific language emphasizing “starting from oneself.” At the enterprise level, they focus on production and operation behaviors such as pollution control and emission reduction, technological innovation, and compliant operation, highlighting “main responsibility.” At the government level, they focus on supervision and services such as ecological supervision, mechanism construction, and policy support, reflecting “leadership and guarantee.” This hierarchical representation not only conforms to the behavioral boundaries of different subjects but also forms a multi-governance pattern of “government leadership, enterprise main responsibility, and public participation,” enhancing the operability and authority of the discourse and realizing the discursive function of “behavioral guidance.”

In summary, provincial and municipal environmental protection initiatives achieve “conscience awakening” through mental processes, “connection construction” through relational processes, and “behavioral guidance” through action processes. These three form a coherent logical chain of ecological meaning representation, which strictly adheres to the inherent requirements of the three principles of Harmonious Discourse Analysis and constitutes a complete corresponding relationship of “principle - process - meaning.”

4.3. Ecological Governance Logic Behind Discursive Representation

Behind the discursive representation of provincial and municipal environmental protection initiatives lies a clear local ecological governance logic, which not only reflects hierarchical commonalities but also exhibits functional differentiation and highlights the participatory characteristic of multi-subject collaboration. Despite differences in administrative levels, both provincial and municipal initiatives bear the dual goals of “policy communication” and “public mobilization,” a commonality that highly aligns with the theoretical orientation of ecological governance emphasizing “the integration of policy implementation and social participation.” For instance, provincial initiatives such as the Yangtze River Delta “Zero-Waste City” Regional Co-construction and Joint Governance Initiative respond to the national “dual carbon” goal and regional integration strategy, clarifying requirements for cross-regional collaborative governance through action processes. Municipal initiatives like the Nanjing Ozone Pollution Prevention and Control Campaign Initiative refine provincial “pollution prevention and control” policies into specific operational guidelines such as “off-peak refueling” and “green travel.” Both construct a governance loop of “top-down policy communication and bottom-up action implementation” through the reasonable collocation of transitivity processes.

Beyond these commonalities, the functional differentiation corresponding to hierarchical differences is equally notable: the proportion of relational processes in provincial initiatives (18.3%) is higher than that in municipal ones (15.2%). Provincial initiatives frequently adopt macro expressions such as “Humans and nature form a community of shared life,” focusing on conceptual guidance and regional governance coordination, which is highly consistent with the functional positioning of provincial governments in “macro decision-making and conceptual dissemination”. In contrast, municipal initiatives have a higher proportion of action processes (60.5%) than provincial ones (56.2%), incorporating specific operational requirements like “reducing outdoor activities from 12:00 to 16:00” and “nighttime off-peak refueling,”

with an emphasis on practical policy implementation that aligns with the functional division of municipal governments in “policy execution and practice promotion.” This difference clearly presents the hierarchical operational logic of local ecological governance in China—“provincial conceptual guidance and municipal practical implementation”—which is consistent with the core theoretical tenet of ecological governance emphasizing “hierarchical linkage and respective responsibilities.”

Meanwhile, the agents of transitivity processes in the corpus cover three relatively balanced subjects: the public, enterprises, and governments, further reflecting the governance characteristic of “multi-subject collaboration.” As “leaders” of governance, governments clarify governance directions and safeguard measures through action processes; as “core subjects” of ecological responsibility, enterprises assume ecological obligations through actions such as technological innovation and compliant operation; as “extensive participants” in governance, the public fulfill ecological duties through daily environmental behaviors. The collaborative linkage of these three subjects forms a governance pattern of “multi-party participation and collaborative governance,” which is consistent with the mainstream theoretical orientation of ecological governance.

In summary, the discursive representation of provincial and municipal environmental protection initiatives concisely embodies the core operational logic of local ecological governance in China—“provincial conceptual guidance, municipal practical implementation, and multi-subject collaboration.” This logic not only conforms to the functional division of labor among China’s administrative levels but also highly aligns with relevant ecological governance theories, demonstrating the in-depth unity between official environmental discourse and governance practice.

5. Conclusions

This study finds that the transitivity processes in provincial and municipal official environmental protection initiatives are dominated by action processes, supplemented by mental processes and relational processes, accounting for 97.5% of the total. This centrally embodies the core assumption of “people-orientedness” in Harmonious Discourse Analysis and clarifies the pluralistic environmental protection responsibilities of “the public - enterprises - governments”. The three principles of Harmonious Discourse Analysis exhibit clear regularity in the representation of transitivity processes: the principle of conscience is mainly represented by emotional mental processes (56.7%) focusing on conscience awakening; the principle of proximity is dominated by ascriptional relational processes (53.5%) emphasizing connection construction; the principle of regulation is centered on hierarchical action processes focusing on behavioral guidance. These three form an ecological meaning representation logic of “conscience awakening - connection construction - behavioral guidance”. Additionally, while sharing the common goals of “policy communication - public mobilization”, provincial and municipal environmental discourses exhibit hierarchical differences of “provincial conceptual guidance - municipal practical implementation” and highlight the participatory characteristic of “multi-subject collaboration”. Collectively, they reflect the operational logic of local ecological governance in China: “provincial conceptual guidance - municipal practical implementation - multi-subject collaboration”.

These findings not only verify the adaptability of the Harmonious Discourse Analysis framework to provincial and municipal official environmental protection

initiatives but also refine the corresponding path of “three principles - transitivity processes - ecological meaning” through the combined quantitative and qualitative analysis of the transitivity system, improving the application methods of this framework in Chinese official discourse. Furthermore, they reveal the distribution characteristics and governance logic of transitivity processes in cross-hierarchical environmental discourses, filling the research gap in existing studies on the “initiative” genre and “provincial-municipal cross-hierarchical” discourse analysis, and enriching the research objects and analytical dimensions of ecolinguistics.

Based on the above research conclusions, targeted optimization can be made to the creation of provincial and municipal environmental protection initiatives in practice: Provincial initiatives may appropriately increase cognitive mental processes to enhance the depth of conceptual dissemination and add action processes related to regional coordination to strengthen overall planning functions; municipal initiatives need to refine the operational guidelines of action processes to improve practical guidance and integrate emotional mental processes with local ecological scenarios to enhance the sense of regional identity; at the cross-hierarchical level, the complementarity of process types between provincial and municipal initiatives should be strengthened—provincial initiatives focusing on relational processes and cognitive mental processes, and municipal initiatives emphasizing action processes and emotional mental processes—forming a discourse system of “unified concepts - coordinated actions” to facilitate the implementation of the governance logic.

Meanwhile, this study also has certain limitations: the limited number of corpora (24 articles) fails to cover initiatives from all provinces and special ecological regions, and it does not involve empirical research on discourse communication effects, making it impossible to verify the actual impact of representation methods on public behavior. Future research can be expanded in multiple aspects: expanding the corpus scale to include initiatives from more provinces and different time periods for diachronic comparative analysis; combining questionnaires or interviews to explore the correlation between discourse representation and public environmental behaviors, verifying the practical effects of discourses; comparing the discourse differences between provincial, municipal and county-level environmental protection initiatives to construct a more comprehensive hierarchical analysis framework of local ecological discourses.

Conflicts of Interest

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