**VIETNAM NATIONAL UNIVERSITY, HANOI**
**UNIVERSITY OF LANGUAGES AND INTERNATIONAL STUDIES**

**HOÀNG THỊ KIM OANH**

# CONCEPTUAL METAPHORS OF CLIMATE CHANGE IN ENVIRONMENTAL PROTECTION DISCOURSE

***(Ẩn dụ ý niệm về biến đổi khí hậu trong diễn ngôn bảo vệ môi trường)***

Major: English Linguistics

Code: 9220201.01

**SUMMARY OF DOCTORAL THESIS**

**Hà Nội - 2026**

The study has been conducted at

**University of Languages and International Studies, VNU**

Supervisor: **1. Prof. Dr. Nguyen Quang**

**2. Dr. Huynh Anh Tuan**

Reviewer 1: ……

Reviewer 2: ……

Reviewer 3: ……

Luận án sẽ được bảo vệ trước Hội đồng chấm luận án tiến sĩ họp tại:
Trường Đại học Ngoại ngữ, Đại học Quốc gia Hà Nội
vào hồi giờ ngày tháng năm 2026

**Có thể tìm hiểu luận án tại:**

Thư viện Quốc gia Việt Nam

Trung tâm Thông tin - Thư viện, Đại học Quốc gia Hà Nội

# CHAPTER I: INTRODUCTION

This chapter consists of Rationale, Aims and Objectives, Research questions, Scope of the study, Definition of terms, Significance of the study, Assumptions and Organization of the dissertation.

## 1.1. Rationale

In recent decades, climate change has become one of the central issues in global public discourse, particularly in the spheres of politics and mass media (Skinnemoen, 2009; Ockwell et al., 2009). The media not only reflect scientific findings, synthesis reports, and policy debates, but also actively participate in the construction of social meaning, thereby shaping public understanding and encouraging responses at multiple levels (Weart, 2003; Kavada, 2012, 2014). However, as an abstract, complex, large-scale, and long-term phenomenon, climate change poses significant cognitive challenges to the public. From the perspective of cognitive linguistics, conceptual metaphor is an important cognitive tool that enables people to conceptualize abstract phenomena through more concrete experiential domains (Lakoff & Johnson, 1980, 2003). Therefore, the study of conceptual metaphors in climate change discourse not only helps identify patterns of linguistic expression but also clarifies the cognitive structures and ideological orientations that govern how this phenomenon is represented in the media. On this basis, this dissertation investigates 50 climate change articles published in *The Guardian* in 2021 in order to exploore how conceptual metaphors of climate change are cognitively constructed and the ideological orientations that motivate these metaphors, thereby contributing to the scholarly foundation for research on conceptual metaphor in contemporary environmental communication as well as offering important implications for environmental communication.

## 1.2. Aim and objectives

Grounded in a primarily qualitative, critical discourse-analytic research design complemented by a limited quantitative frequency analysis (Creswell & Creswell, 2018; Creswell & Creswell, 2023), this study aims to explore the cognitive and ideological mechanisms in conceptual metaphors of climate change within 50 climate change discourses published on The Guardian in 2021 in order to identify the conceptual metaphors generated from the metaphorical expressions in the environmental protection discourses selected from The Guardian, and to interpret these metaphorical expressions as conceptual metaphors of climate change; examine the conceptual structure on the levels of *image schemata*, *domains, frames* and *mental spaces*; and explore the ideologies functioning in the source text.

## 1.3. Research questions

1. What conceptual metaphors of climate change are generated by the metaphorical expressions in the environmental protection discourse?
    1.1. What are the most common and recurrent source domains for the climate change?
    1.2. How are the source domains mapped onto the target domain?
2. How are the metaphors of climate change conceptualized in terms of the schematicity levels, *image schemata, domains, frames* and *mental spaces* in the environmental protection discourse?
3. What ideologies motivate the conceptual metaphors of climate change interpreted from the environmental protection discourse?

## 1.4. Scope and methodology of the study

The study focuses on a corpus of fifty articles published in The Guardian's climate crisis section in 2021. The study is limited to metaphorical expressions identified through established procedures, including Critical Metaphor Analysis (CMA), Metaphor Identification Procedures (MIP. The analysis concentrates on three thematic domains, consisting of CAUSE, IMPACT, and ACTION. Kövecses's four-level schematicity model,

comprising *image schemata, domains, frames,* and *mental space* is applied to examine metaphorical expression to capture both embodied grounding and discourse-specific realizations. The study adopts a constructivist worldview and a qualitatively driven, corpus-assisted design with supplementary quantitative support.

### 1.5. Definition key terms

This section provides definitions of key terms including climate change, environmental protection discourse, conceptual metaphor, mapping, ideology, image schemata, domains, frames, and mental spaces.

### 1.6. Significance of the study

The study contributes theoretically by integrating multiple analytical frameworks within metaphor research and empirically by identifying and categorizing metaphorical patterns in climate change discourse. Practically, it offers insights relevant to environmental communication, journalism, education, and policymaking.

### 1.7. Assumptions

The research is grounded in epistemological, methodological, analytical, and data-related assumptions. It assumes that meanings are socially constructed, that metaphors can be systematically identified and interpreted, and that The Guardian's discourse reflects an institutional ideological stance toward climate change.

### 1.8. Organization of the dissertation

The dissertation is organized into the five chapters, consisting of Chapter I: INTRODUCTION, Chapter II: LITERATURE REVIEW, Chapter III: METHODOLOGY, Chapter IV: FINDING AND DISCUSSION, and Chapter V: CONCLUSION.

## CHAPTER II: LITERATURE REVIEW

This chapter reviews the literature relating to the conceptual metaphor, in general, and the conceptual metaphors in the field of environment, in particular before presenting the theoretical framework of the study.

### 2.1. Conceptual metaphor theory (CMT)

Lakoff and Johnson (1980) introduced CMT argueing that human *thought processes* are largely metaphorical (p. 06). Lakoff and Johnson (1980; 2003) claim that, in most of the little things we do every day, we simply think and act more or less automatically along certain lines (p. 04), proposing that metaphor is a fundamental part of our thought and metaphorical language arises from preexisting patterns of metaphorical thought (Gibbs, 1994; McGlone, 2007). CMT, since then, has reconceptualized metaphor in language as the systematic and frequently visible underlying conceptual structures of metaphor in thought (Steen, 2014).

#### 2.1.1. Definition of Conceptual Metaphors

Lakoff & Johnson (1980; 2003), giving no exact definition to the term "conceptual metaphors," simply mean that different phenomena of social life and its ideologies can be forms of basic-level concepts and experiences to map onto the target domains in the process of conceptualizing metaphorical expressions. Therefore, the word metaphor has come to mean *a cross-domain mapping in the conceptual system*.

#### 2.1.2. Characteristics of Conceptual metaphors

Lakoff and Johnson (1980; 2003) define conceptual metaphor with five characteristics, consisting of a) being organized in hierarchical structures (p. 07-09), b) being highlighted and hidden (p.13- 15), c) being culturally dependent (p. 2003, p. 21-22), d) being grounded in a specific way (p. 44-47), and e) being understood, possibly, in terms of more than one domain (p. 97-105). These characteristics can be deeply understood through four fundamental aspects of CMT, as discussed below.

***- Linguistic metaphors of figurative language***

Charteris-Black (2004) defines the linguistic metaphors and conceptual metaphors based on the three criteria of linguistics, pragmatics and contextual cognitive as follows: A *metaphor* is a linguistic representation that results from the shift in the use of a word or phrase from the context or domain in which it is expected to occur in another context or domain where it is not expected to occur, thereby causing semantic tension. A *conceptual metaphor* is statement that resolves the semantic tension of a set of linguistic metaphors by showing them to be related.
Lakoff and Johnson (1980; 2003) believe *simile, personification, metaphor, metonymy, synecdoche*, etc. to be necessary for expressing the unique and most personally significant aspects of our experience.

***- Embodiment***

The "embodiment" hypothesis of CMT states that when interpreting the metaphorical expressions, our thought is based on bodily experiences which correlate the intensity of a physical activity or emotional state with the production provided by our body to make something meaningful (Lakoff & Johnson, 1999; Gibbs, 2009; Kövecses, 2005, 2015). In the conceptualization process, the human body plays an important role in embodying the concepts by putting the concept into "image schemata." Undoubtedly, people in diverse languages very often share the same bodily experiences when being associated with the same feeling and these bodily experiences, embodiment, produce potentially universal or, at least, near-universal conceptual metaphor.

***- Conceptual keys***

Charteris-Black's (2004) defines a "conceptual key" as a higher-level metaphoric concept that serves to organize and explain a group of lower-level specific metaphors within a particular discourse, helping to resolve the semantic tension of a set of conceptual metaphors by showing them to be related (p. 22).

***- Ideologies***

Carvalho (2007) considers ideology as "a system of values, norms and political preferences, linked to a program of action vis-à-vis a given social and political order" (p. 225). To a certain extent, ideologies always involve a vision of an ideal world with which lived existence is confronted (Carvalho, 2007, p. 225).

*+ Ideologies with Conceptual Metaphor*

Ideologies inspire the senders' use of metaphorical expressions, and then the metaphorical expressions provoke conceptual metaphor. Scholars are on the consensus that critical discourse analysis provides an ideological explanation when "such processes become discursive, serving a particular power group in a particular society to maintain its social power through the processes of naturalization" (Taylor, 1995).

*+ Ideologies with The Guardian*

The Guardian frames climate change as an urgent global crisis requiring immediate public and political response. These patterns reveal that The Guardian's ideological framework is grounded in a form of progressive environmental humanism, integrating scientific rationality with moral and civic imperatives, positioning climate change not merely as an environmental issue but as a profound test of social justice and democratic responsibility.

*+ Conceptualization of Ideologies relating to climate change*

In the present dissertation, ideologies are conceptualized neither as mere political bias nor as overtly articulated belief systems. Instead, drawing on socio-cognitive and critical discourse traditions, ideologies are understood as shared systems of values, norms, and assumptions that structure how social groups interpret reality and guide action. This study adopts the stance that ideologies both motivate and are reinforced by conceptual metaphors. In climate change discourse, ideologies are treated as inferable cognitive constructs rather than explicitly stated positions.

**2.1.3. Critiques of CMT**

Generally, the skepticism towards Lakoff and Johnson's (1980; 2003) CMT focuses on four issues, (i) methodology, (ii) direction of analysis, (iii) schematicity, and (iv) cultural universality.

Methodologically, critics have found a contradiction in the theory referred to the method of identifying linguistic metaphors. On the one hand, some expressions are taken for granted as metaphorical by CMT researchers, and, on the other, the approach does not pay attention to which actual expressions are used for the target domain in natural discourse (Steen et al, 2007b). Kövecses (2017a) claims that, instead of being based on just lexical or intuitive data, the method of using real data for metaphor analysis reveals an apparently real weakness of CMT.

Some researchers consider the assumption of conceptual metaphors as a weakness of deductive top-down approaches. The first opposition relates to the principle of "the dominance of irregularity." The argument is that in the top-down approach, a huge number of irregularities in the behavior of particular metaphorical expressions are not concerned properly when the work of metaphor analysis starts with the meticulous examination of particular linguistic expressions in particular discourses (Dobrovol'skij & Piirainen, 2005; Stefanowitch, 2007; Kövecses, 2019). The second opposition is the goal to identify each and every conceptual metaphor relating to a particular domain (Kövecses, 2010; Dobrovol'skij and Piirainen, 2005; Vervaeke and Kennedy, 1996; Ritchie, 2003). However, Krennmayr (2013) indicates an inductive bottom-up approach seems more appropriate when researchers want to capture all metaphorical language in their data, otherwise, a deductive top-down approach is suitable for their corresponding expressions and a specific selection of conceptual metaphors (p. 11).

Many scholars believe that "the two-domain account suggested by Lakoff and Johnson (1980; 2003) does not work and must be supplemented by a model of explanation that relies on four (or more) domains, or spaces." Kövecses (2015) argues that to think of conceptual metaphors as a set of mapping relations between two domains may lead to an important problem that is source domains typically contain more conceptual material than what is actually carried over to the target domain.

Conceptual metaphors suggested by Lakoff and Johnson are believed to be universal. In this aspect, other scholars believe that context is determined by local culture to be characterized by the physical, social, cultural, discourse, etc. aspects, and consists of factors such as the setting, topic, audience, medium, etc. Therefore, conceptual metaphors may differ from one culture to another culture. Kövecses (2000, 2008, 2010a, 2010b, 2017a, 2017b) claims that metaphorical conceptualization in natural situations occurs under two simultaneous pressures, consisting of the pressure of embodiment and the pressure of context.

### 2.1.4. Metaphor Identification Procedure

To identify metaphors in the discourse genres concerned about, Charteris-Black (2004) presented Critical Metaphor Analysis Approach (CMA) to identify metaphors in discourse, Steen et al. (2007) introduced Metaphor Identification Procedure (MIP).

***- Charteris-Black's (2004) CMA Metaphor Identification Procedure***

Charteris-Black's (2004) CMA provides a well-structured and clear framework for analyzing metaphor used, emphasizing the role of metaphors in constructing social realities from the perspective of how they provide us with certain ways of viewing the social world. The scholar suggests the definition of metaphors should be established by a set of linguistic criteria, pragmatic criteria and cognitive criteria in three stages, consisting of (i) Metaphor identification, (ii) Metaphor interpretation, and (iii) Metaphor explanation.

***- Steen et al.'s (2007) Metaphor Identification Procedure (MIP)***

Steen et al. (2007) created a method to analyze conceptual metaphors in discourses, named MIP, providing a reliable tool to precisely identify metaphorical mappings in conceptual structure (Steen et al., 2010b, p. 08). Applied MIP,

each lexical unit will be examined with three aspects of i) contextual meaning, ii) basic meaning, and iii) contextual meaning versus basic meaning. Generally, the procedure to identify metaphorical expressions suggested by Steen et al. (2007) with MIP is rather simple and easy to be applied.

**2.1.5. Conceptual Metaphor Mapping**

CMT, nevertheless, has focused tightly on explaining the underlying conceptual scenarios involved in conventional metaphors rather than expanding our understanding of the cognitive basis of conceptual metaphors (Ahrens, 2010). CMT's followers have proposed various models to account for the linguistic data more precisely (Grady, 1997; Clausner & Croft, 1997).

Clausner and Croft's (1997) suggest narrowly constraining the source domain so as to limit the mappings that may take place between the source domain and the target domain. With the help of mappings, the metaphorical expressions used in a discourse can be explained and provide fine distinctions of the intensity levels of the concepts in the source domains.

Various conceptual metaphor mapping models have been proposed by researchers (Clausner & Croft, 1997; Grady, 1997; Ahrens & Say, 1999; Ahrens, 2010). Ahrens (2010) presents a conceptual metaphor mapping model which "is designed to operationally define a method to determine the underlying reasons for the source-target domain pairings of a conceptual metaphor (p. 187). The main idea of this conceptual metaphor mapping is that the lexemes involved in the conceptual metaphor must be identified and the associated groupings analyzed (p. 188).

**2.1.6. Current approaches to metaphor analysis in discourse**

- ***Conceptual Blending Theory:*** Fauconnier and Turner's (1998; 2002) Conceptual Blending Theory has often been regarded as a central theory of cognitive dynamism. Its importance stems from (a) its broad applicability to be able to explain not only metaphor but also metonymy, grammar, analogy, logical structures, mathematics, and humor; (b) its deep cognitive mechanism, when moving beyond "knowledge organization" to explain "meaning construction," emphasizing how the brain actively builds reality through conceptual integration and creativity rather than just using pre-existing mappings.

**- *Corpus-based Conceptual Metaphor Analysis Approach:*** Charteris-Black (2004) develops his CMA which integrates corpus linguistics with cognitive linguistics in identifying metaphors. The scholar uses cognitive linguistic to identify probably metaphorical expressions and uses corpus linguistics to learn aspects of language based on empirical evidence. Corpus studies on conceptual metaphors can be divided into three different types (Semino, 2008). In the first type, researchers use general-purpose corpora for patterns of conceptual metaphors; in the second type, researchers choose corpora representing text types, genres or particular periods, in order to investigate similarities and differences between these; and in the third type, researchers compare conceptual metaphor occurring in corpora representing different language (Tissari, 2017).

**- *Conceptual categories and Construal:*** Croft and Cruse's (2004) theory of conceptual categories and construal offers a highly compatible and theoretically enriching extension to CMT. Croft and Cruse (2004) believe conceptual categories should be viewed as radial, flexible, and usage-based, grounded in embodied experience and shaped by context, not static containers of meaning but dynamic conceptual structures that emerge through language use. Construal refers to the speaker's ability to conceptualize and present the same situation in different ways without altering its objective content.

+ *Conceptual categories as structured meaning potentials:* Conceptual categories are organized around prototypes, extensions, and family resemblances rather than fixed boundaries. Importantly, a single lexical item may activate different conceptual categories depending on contextual construal. This insight is

particularly relevant for metaphor analysis, where metaphorical expressions often rely on selectively activating certain aspects of a source category while suppressing others. Conceptual metaphors, from this perspective, are not mappings between undifferentiated domains but interactions between structured categories under specific construals.

+ *Construal dimension of conceptualization*: Croft and Cruse (2004) identify several dimensions of construal, including specificity, focusing, prominence, perspective, and dynamism. Construal refers to the cognitive operations by which speakers conceptualize and linguistically encode a situation in alternative ways, even when the objective content remains constant, consisting of (i) ***specificity,*** concerning the level of detail at which a situation is conceptualized, (ii) ***focusing and profiling,*** determining which elements of a conceptual structure are foregrounded, (iii) ***perspective and viewpoint,*** allowing analysts to account for whose interests and experiences are foregrounded in metaphorical construals, and (iv) ***dynamism,*** concerning whether situations are construed statically or as unfolding processes.

+ *Construal operations and metaphorical meaning:* Conceptual categories and construals offer a principled account of how metaphorical meanings are selectively shaped, foregrounded, and perspectivized within these processes. This framework, specifically, enables the analysis of metaphorical expressions in terms of which sub-structures of a conceptual category are activated, how meaning is construed across genres and communicative purposes, and how perspectival choices contribute to ideological framing.

**- *Deliberate and Non-deliberate Metaphors Analysis Approach:*** Steen (2003) introduced Deliberate Metaphor Theory. According to the theory, metaphors considered as "deliberate" concerns the intentional use of metaphors to be able to produce conceptual metaphors between senders and addressees (Steen, 2017, p. 01). This definition partly states that language users, both senders in production and addresses in reception, pay distinct attention to the source domain as a separate domain of reference (Steen, 2017). According to Steen (2011), a metaphor is considered as deliberate when addressees must pay attention to the source domain as an independent conceptual domain (or space or category) that they are instructed to use to think about the target of the metaphorical expression (p. 84).

**- *Schematicity Approach:*** Langacker (1987) considers the ability to generalize specific units of a schema to be one of the most central human cognitive capabilities and equates with the extraction of schemata. This ability may be operative in any domain or combination of domains of cognition (ibid, p. 132) and involves the recognition of core commonalities, abstracting away from less important details which may differ from one concept or cognitive experience to another. Tuggy (2012) elaborates on the term, stating that all concepts communicated linguistically are schematic in some degree and we can find hierarchies of schematicity, a relative matter, with one concept schematic relative to others but itself serving as an elaboration of yet more highly-schematic concepts. When there is not such full coincidence because of the omission, contravention or distortion of the standard's specifications, a case of *partial schematicity* occurs (Tuggy, 2012), which is more salient than full schematicity.

**- Schematicity with Conceptual Metaphor**: Kövecses (2015, 2017c, 2020), with his Extended Conceptual Metaphor Theory (ECMT), distinguishes four levels of schematicity, consisting of image schemata, domains, frames, and situational mental spaces, of which, hierarchically, image schemata operate on a sub-individual level while domains and frames on the supra-individual one, and the processes in situational mental spaces are based on the individual level. The highest level is "image schemata," arising from our most basic embodied experience with continuous analogue patterns. The next level of schematiciy is "domains," which is conceptually supported by image schemata and characterized by a variety of different aspects. At the next level

"down," we have "frames," which capture the various aspects of domains. A particular frame helps us to conceptualize an experience, which is a way or an effort of processing a new idea.. The "lowest" level of the schematicity is "mental spaces," constantly modified cognitive structures, which are established in real-time in discourse and are stored in the short-term memory of the speakers.

**- Schematicity with Conceptual Metaphor Mapping Method**

Conceptual Metaphor Mapping Method practically aim to "constrain the source domain so as to limit the mappings that may take place between the source domain and the target domain" (Clausner & Croft, 1997, in Ahrens, 2010, p. 186) as well as "to operationally define a method to determine the underlying reasons for the source-target domain pairings of a conceptual metaphor" (Ahrens, 2010, p. 187). On another dimension, schematicity levels theoretically put human beings' conceptual system on a hierarchical level.

### 2.2. Climate change and environmental protection discourse

This section reviews and delineates the scope of the study. It also clarifies key concepts related to climate change, the environment, environmental discourse, environmental protection discourse, and the impacts of climate change on the environment.

#### 2.2.1. Climate change

Within this study, climate change is conceptualized as a cognitive-discursive construct, whose meanings emerge at the intersection of scientific knowledge, media discourse, and ideological positioning. For analytical purposes, climate change is examined through three interrelated foci, consisting of CAUSE, IMPACT, and ACTION, which serve as key sites of metaphorical conceptualization, structuring how responsibility, consequences, and responses are cognitively framed in climate change discourse.

#### 2.2.2. The concept of environment

The concept of "environment" in environmental protection is rather broad, consisting of three components of nature, human-made and human. With the component of "nature," the concept of environment consists of the physical and biological aspects, in which the physical environment includes geology, minerals, soils, climate, water resources, air quality and emissions, noise, and hazardous waste management; and the biological environment includes terrestrial ecosystems, natural fauna, natural vegetation, aquatic ecosystems, and endangered species.

#### 2.2.3. Environmental discourse

Environmental discourse is a basic area where people make sense of the natural world and talk about the political and social effects of changes in the environment. Environmental discourses are products of our social institutions, cultural representations, political struggles; they both embody and reflect national identities. Consequently, environmental discourse becomes an essential conceptual framework wherein metaphors of climate change emerge, disseminate, and gain ideological significance.

#### 2.2.4. Environmental protection discourse

Environmental protection discourse is a type of environmental discourse that focuses on moral action, stewardship, sustainability, and duty to future generations. It uses metaphorical framing a lot, such comparing climate change to battle, a journey, or a threat, to make complicated things easier to understand and get people involved. Environmental protection discourse positions the environment as vulnerable, threatened, or endangered, thereby legitimizing particular forms of action, responsibility, and agency.

#### 2.2.5. Climate change impacts on the environment

The impacts that climate change put on the nature these days and the actions that human beings are required to protect the environment when facing climate change, is a part of environment. These days, natural disasters occurring more frequently and intensely have raised urgent demands for improving forecasting capacity, risk

management, and disaster prevention for this region. Environmentally, humanity now stands at a critical juncture where even slight temperature fluctuations can produce profound consequences.

### 2.2.6. The foci of CAUSE, IMPACT and ACTION

The triad of CAUSES, IMPACTS, and ACTIONS related to climate change has emerged as a central theme across academic, institutional, and public discourse. This growing attention is reflected in several key publications. Climate change stands as one of the most defining challenges of the 21st century. Climate change is not merely an environmental concern, it is a multidimensional crisis that demands an integrated and sustained response. As explored in the following chapter, conceptual metaphors play a pivotal role in shaping public understanding and motivating behavioral change. These metaphors, embedded in the language of CAUSE, IMPACT, and ACTION, reflect distinct disciplinary perspectives and evoke different cognitive frames.

## 2.3. Previous studies on climate change metaphors

### 2.3.1. Reviewing previous studies

Twelve studies (12) reviewed in this section has been conducted by Jorunn Skinnemoen (2009), Nadine Andrews (2012), Brigitte Nerlich and Rusi Jaspal (2012), Stephen J. Flusberg, Teenie Matlock and Paul H. Thibodeau (2017), Alice Deignan (2017), Oleksandr Kapranov (2017), Oleksandr Kapranov (2018), Muhammad Adam and Wahyuni Wahyuni (2019), Kwaśniewska (2019), Kennett Ravn (2020), Mervat Mahmoud Ahmed (2022), and Tetiana Myroniuk (2025). These documents have approached the field of climate change conceptual metaphors with different purposes, concretely:

a). Identifying and categorizing conceptual metaphors in climate discourse to map out the types of metaphors by measuring the frequency of the metaphorical expressions,
b). Analyzing the cognitive, rhetorical, and emotional functions of metaphors to clarify how metaphors shape cognition, evoke emotions, and guide behavior,
c). Exploring metaphors in political, economic, and media contexts to show how metaphors function as strategic tools in politics, economics, and communication, and
d). Evaluating the social, ethical, and policy implications of metaphor use to assess the broader societal, ethical, and political impact of metaphors and propose responsible communication strategies.

### 2.3.2. Patterns of climate change conceptual metaphors from the previous studies

Totally, sixty-six (66) conceptual metaphors were interpreted by the authors of the previous studies. On the basis of this principle, six major patterns of conceptual metaphors can be identified, consisting of ***Pattern #1***: The current state of affairs, and particularly the problems that needs to be solved; ***Pattern #2:*** Causes and solutions to problems; ***Pattern #3:*** Plans and policies; ***Pattern #4:*** Future states of affairs; ***Pattern #5:*** Various types of participants and entities in the political domains (including private citizens, parties, organizations, institutions, states); ***Pattern #6:*** Nature/environment as positive, beneficial, or life-enhancing.

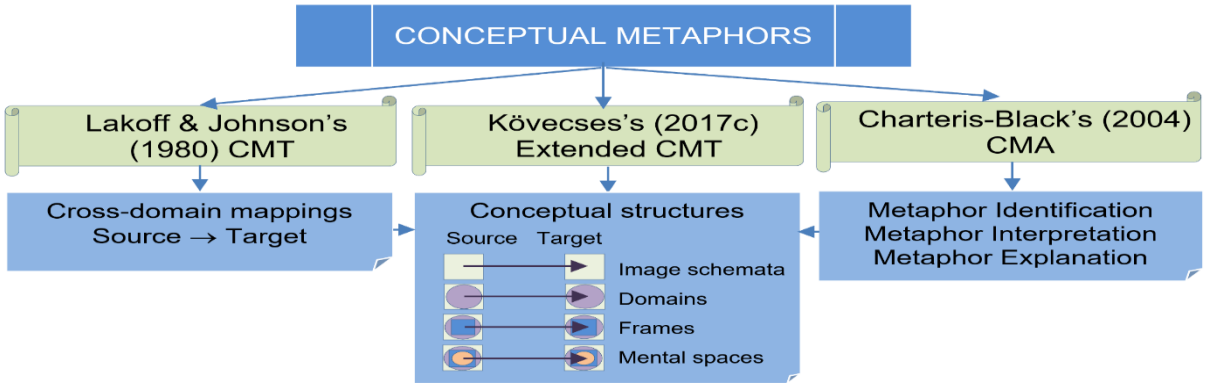
### 2.3.3. Research gaps from the previous studies

A synthesis of the twelve previous studies on climate-change metaphors reveals several important theoretical and methodological issues remain insufficiently explored. As a first point, none systematically applies the notion of schematicity levels, a cognitive-hierarchical structure that ranges from *image schemata* to *domains*, *frames*, and *mental spaces*. Another point to consider is the limited used of systematic mapping procedures when transferring concepts from the source domain onto the target domain, leaving aloophole to the way to interpret conceptual metaphors. Except for Nerlich and Jaspal (2012), neglecting of ideological shifts in metaphorical framing and the power stances of the discourse delivered may be another loophole found with these twelve previous studies. The study is designed to advance climate-metaphor research in response to the gaps identified above.

### 2.4. Theoretical framework

The study analysis, with the background of Jakoff and Johnson's (1980, 2003) CMT, is an application of Charteris-Black's (2004) CMA, supported by Steen et al.'s (2007) MIP, Ahren's (2010) Conceptual Metaphor Mapping Method, and Imani's (2022) CMA adaptation, working as the operational frameworks on Kövecses's (2017) Schematicity approach, providing a comprehensive framework for analyzing conceptual metaphors in 50 articles published in The Guardian with the theme of "CLIMATE CRISIS." Figure 2.06 below illustrates the theoretical framework of the study.

**Figure 2.06:** *The theoretical framework of the study*




## CHAPTER III: RESEARCH METHODOLOGY

This chapter outlines the methodological framework adopted to address the research questions presented in Chapter I, elaborating on the philosophical orientation, research design, and analytical procedures employed in exploring conceptual metaphors in environmental discourse on climate change.

### 3.1. Research paradigm

Grounded in a Constructivist Philosophical Worldview, articulated by Creswell and Creswell (2017; 2023), the study incorporates a transformativist paradigm, allowing for an analysis of how metaphors function as ideological tools, defining responsibility and vulnerability by foregrounding certain aspects of climate change while marginalizing others.

### 3.2. Research approach

Adopting *a primarily qualitative research approach* to ensure both comprehensive coverage and theoretical precision, the research employs a dual-procedural approach, consisting of inductive bottom-up and deductive top-down. Furthermore, the study applies a critical discourse analytical orientation to interpret the identified metaphors. This integration of interpretive and critical perspectives reinforces the study's commitment to uncovering the socio-cognitive and ideological dimensions underlying conceptual metaphors in environmental discourse.

### 3.3. Research design

Situated within this constructivist orientation, the study adopts a primarily qualitative, critical discourse analytic research design, complemented by a limited quantitative frequency analysis. This configuration is best characterized as *a core qualitatively driven, corpus-assisted approach with supplementary quantitative support*.

### 3.4. Research methods

#### 3.4.1. Data collection

The data for this study were drawn from The Guardian, a leading British newspaper known for its extensive and influential environmental reporting. A total of fifty articles published in 2021 were selected as the corpus for metaphor extraction and analysis. According to The Guardian's publication records, 358 environment-

related articles were released in 2021, among which the climate crisis hub accounted for the largest proportion in which fifty articles selected for this study.

***- Thematic categorization of the articles***

Fifty (50) articles used in the study, therefore, were categorized into three foci that the articles wanted to express. These foci are the causes, the impacts and the actions that the readers are required to perform to protect the planet.

***- Climate change corpus created***

A climate change corpus relating to 50 articles extracted from The Guardian was created and put into the Sketch Engine website. The corpus consists of 39,995 words.

**3.4.2. Research tools and instruments**

In the study, dictionaries, the online application of Sketch Engine, the qualitative analysis software MAXQDA 26.0, and Spreadsheet Software (Microsoft Excel) were used as tools and instruments to support the process of analyzing metaphorical expressions and conceptual metaphors.

***- Dictionaries***

The Macmillan English Dictionary for Advanced Learners 2nd edition was used as a tool suggested by Steen et al. (2007). In addition, Online Etymology Dictionary was consulted. In the study, dictionaries were used as the instruments to identify the linguistic expressions' meaning, especially to examine the semantic, pragmatic tensions of the metaphorical expressions.

***- Sketch Engine for Language Learning (SKELL)***

Sketch Engine for Language Learning is a simple tool for students and teachers of English to easily check whether or how a particular phrase or a word is used by real speakers of English. The engine provides users many corpora in different languages, in which the English corpus has 52,268,286,493 words. Conducting the study, the dissertation author has put her own corpus, which is the content of all articles used in the study, to use the concordance function of the engine with the name "KIM OANH Climate change corpus."

***- The qualitative software MAXQDA 26.0***

The qualitative software MAXQDA 26.0 was employed to analyze 712 metaphorical expressions and identify underlying conceptual metaphors.

***- Spreadsheet Software (Microsoft Excel)***

Spreadsheet software, Microsoft Excel, was used to construct a structured annotation matrix in which each identified metaphorical expression was recorded together with its contextual excerpt, lexical unit, basic meaning, contextual meaning, source domain, target domain, and corresponding conceptual metaphor.

**3.4.3. Expert Review and Validation**

Two experts holding doctoral degrees in the field of conceptual metaphor studies and have published extensively on related topics were invited to provide professional advice and critical feedback on the identification of metaphorical expressions and the interpretation of conceptual metaphors. In addition, the two experts offered interpretive feedback on the broader analytical outcomes, especially on how conceptual metaphors frame the notions of CAUSE, ACTION, and IMPACT of climate change within environmental discourse.

**3.4.4. Data analysis frameworks**

This section outlines the two complementary analytical frameworks employed in the study, epistemological analysis and cognitive analysis.

***- Epistemological analysis***

The epistemological analysis functions as a rigorous intermediate step between the identification of metaphorical expressions and the subsequent inference of conceptual metaphors, thereby ensuring analytical transparency and methodological consistency. To maintain analytical rigor, the study adopts four criteria for establishing these underlying concepts: (i) structure semantic frames to group metaphorical expressions into semantic frames related; (ii) embodiment justification to consider the concept evoked by the metaphorical expressions and the structural semantic frames based on embodily experiences; (iii) collocational and co-textual evidence to examine the structural semantic frames of the metaphorical expressions based on the context the metaphorical expressions occur, especially with the three foci of CAUSE, IMPACT and ACTION; and (iv) conceptual coherence assessed through blending to solve the case that a metaphorical expression overlap the structural semantic frames. This step aimed to capture recurrent experiential patterns underlying multiple concrete concepts, thereby preparing the analytical ground for the identification of image-schematic structures at a later stage. Through the four steps, the epistemological analysis yields the 158 concepts for source domains to cognitively analyze the source-target domains at the domain level of the schematicity.

***- Cognitive analysis***

The cognitive analysis in this study proceeds along complementary analytical directions, focusing on how climate change is conceptually structured through specific source domains in discourse through conventional source-target domain mappings. With the concrete concepts emerging from the epistemological analysis of the correspondences between metaphorical expressions and cognitive concepts, the analysis proceeds to examine the conceptualization underlying the transfer from source domains, the concrete concepts identified, to target domains, on four levels of the schematicity. Together, these cognitively analytical directions enable a multi-layered cognitive account of metaphor, linking linguistic expressions, source domains, and image schemata in a coherent framework.

*+ Image-schematic abstraction*

At the image schema level, the findings reveal that climate change metaphors are fundamentally grounded in some embodied schemata, slightly different from a focus to one another. These schematic patterns demonstrated the embodied, pre-conceptual grounding of climate metaphors, revealing that human physical experience provides the cognitive foundation for abstract environmental reasoning.

*+ Domain-level conceptualization*

At the domain level, these schematic structures were elaborated into more specific conceptual metaphors. These interconnections confirmed that domains are schematic elaborations of more basic image-schematic structures, thereby linking embodied experience with culturally established conceptual systems.

*+ Frame-level conceptualization*

At the frame level, the metaphorical structure became further contextualized and particularized. Together, these frames instantiated domain-level metaphors in context, translating generalized mappings into discursive narratives of agency, causation, and consequence.

Notably, although *mental spaces* constituted the most context-specific level in the cognitive architecture of metaphor, this study did not conduct a separate, systematic analysis at the mental-space level. Instead, the present analysis focused on *image schemata*, *domains*, and *frames* as relatively stable and recurrent levels of metaphorical organisation. Across these schematic levels, a consistent hierarchical organization of metaphorical reasoning emerges, confirming that metaphors in climate change discourse are not arbitrary stylistic devices but systematic cognitive and discursive constructs that shape perception, argumentation, and policy orientation. The bottom-up

inductive approach was applied to establish the metaphorical expressions in this stage when the approach allows to move from specific observations (data) to broader generalizations (theories or conceptual metaphors).

**3.4.5. Data analysis process**

In the study, the data analysis process followed a structured and theoretically grounded procedure integrating both inductive and deductive strategies for identifying, interpreting, and systematizing conceptual metaphors in the climate-change discourse. Overall, the analytical process alternates between inductive abstraction and deductive organization, reflecting the layered nature of metaphorical cognition. In the study, six following major activities were undertaken, corresponding to the core methodological pillars of the study.

***- Identifying metaphorical expressions used in the discourse***

Metaphorical expressions were identified through a systematic procedure rooted in Charteris-Black's (2004) CMA and Steen et al.'s (2007) MIP. Generally, this step was done with two phases, consisting of (a) selecting the potential metaphorical expressions by examining the appropriate meaning and the properties of the semantic field, (b) identifying the metaphorical expressions by investigating the semantic, pragmatic and contextual tensions.

*a. Choosing potential metaphorical expressions:*

Potential metaphorical expressions were chosen through close reading of the texts by considering meaning, the semantic fields activated by lexical items in context, consulting standard dictionaries, and, even, relying on the researcher's intuition at this preliminary stage, as suggested by Skinnemoen (2009). The Concordance function of Sketch Engine and MAXQDA 26.0 were used in this phase to quickly provide the frequency and usage patterns in the corpus.

*b. Identifying metaphorical expressions:*

The phase of finding the metaphorical expressions was chiefly based on Charteris-Black's (2004) CMA, suggesting identifying linguistic, pragmatic and cognitive criteria of the potential linguistic metaphors in discourse. The identifying metaphorical expression phase, then, was cross-checked with Steen et al.'s (2007) MIP when going through each potential metaphorical expressions identified with three aspects of i) contextual meaning; ii) basic meaning; and iii) contextual meaning versus basic meaning. In this phase, the English corpus encoded in the Sketch Engine was consulted to examine the collocational and co-textual evidence of the metaphorical expressions to have cues for the concrete concepts evoked.

As a cross-checking method, Steen's (2007) MIP, then, was applied to check the potential metaphorical expressions with three following aspects suggested by Steen (2007), consisting of contextual meaning, basic meaning and contextual meaning versus basic meaning. Also,the Concordance function of Sketch Engine and MAXQDA 26.0, with in-vivo coding function, were used to establish concrete concepts for interpreting conceptual metaphors.

This activity yielded the inventory of 712 metaphorical expressions that formed the empirical basis for subsequent conceptual analysis.

***- Establishing concrete concepts from the metaphorical expressions***

The identification of concrete concepts later assigned to source domains was treated as an instance of interpretation under constraints, whereby analytical decisions were guided and delimited by explicit linguistic, distributional, and conceptual criteria rather than left to individual intuition. At this stage, the analysis was epistemological rather than cognitive, as it focused on the interpretation of meaning grounded in language use and experiential knowledge rather than on source-target mapping.

***- Interpreting conceptual metaphors***

This is the phrase that transfers linguistic data to cognitive structures. The combination of top-down approach and bottom-up approach was applied in this step to interpret the conceptual metaphors, ensuring both systematic coverage of established metaphors and the discovery of context-specific ones (Krennmayr, 2013). The conceptual metaphor interpretation process has two stages, consisting of a) alignment with the analytical foci, CAUSE, IMPACT, ACTION, and b) consolidation based on the thematic orientation constructed by the frames of the frame level, namely role, action, goal, and element, of each metaphorical expression. The application of this multi-stage analytical procedure resulted in the identification of 158 conceptual metaphors.

***- Grouping the conceptual metaphors into systematic patterns***

This activity, with two phases, aimed to integrate the 712 metaphorical expressions and the 158 interpreted conceptual metaphors into a coherent conceptual system that reflects shared inferential patterns and discourse functions. By using conceptual keys, this step, thus, was done with two activities, consisting of a) establishing conceptual metaphor mapping model with multi-levels of conceptualization, and b) constructing source-target correspondences for each metaphorical expressions. In this stage, the top-down deductive approach was applied. The analysis process, then, begins with the "highest" concept of the target domain to provide a quick, systematic, and well-framed initial analytical structure in the "lower" concepts of the target domains. This step reduced redundancy among the 158 conceptual metaphors and highlighted recurrent metaphorical tendencies across the corpus, yielding a more manageable set of 21 generic conceptual metaphors for subsequent analysis.

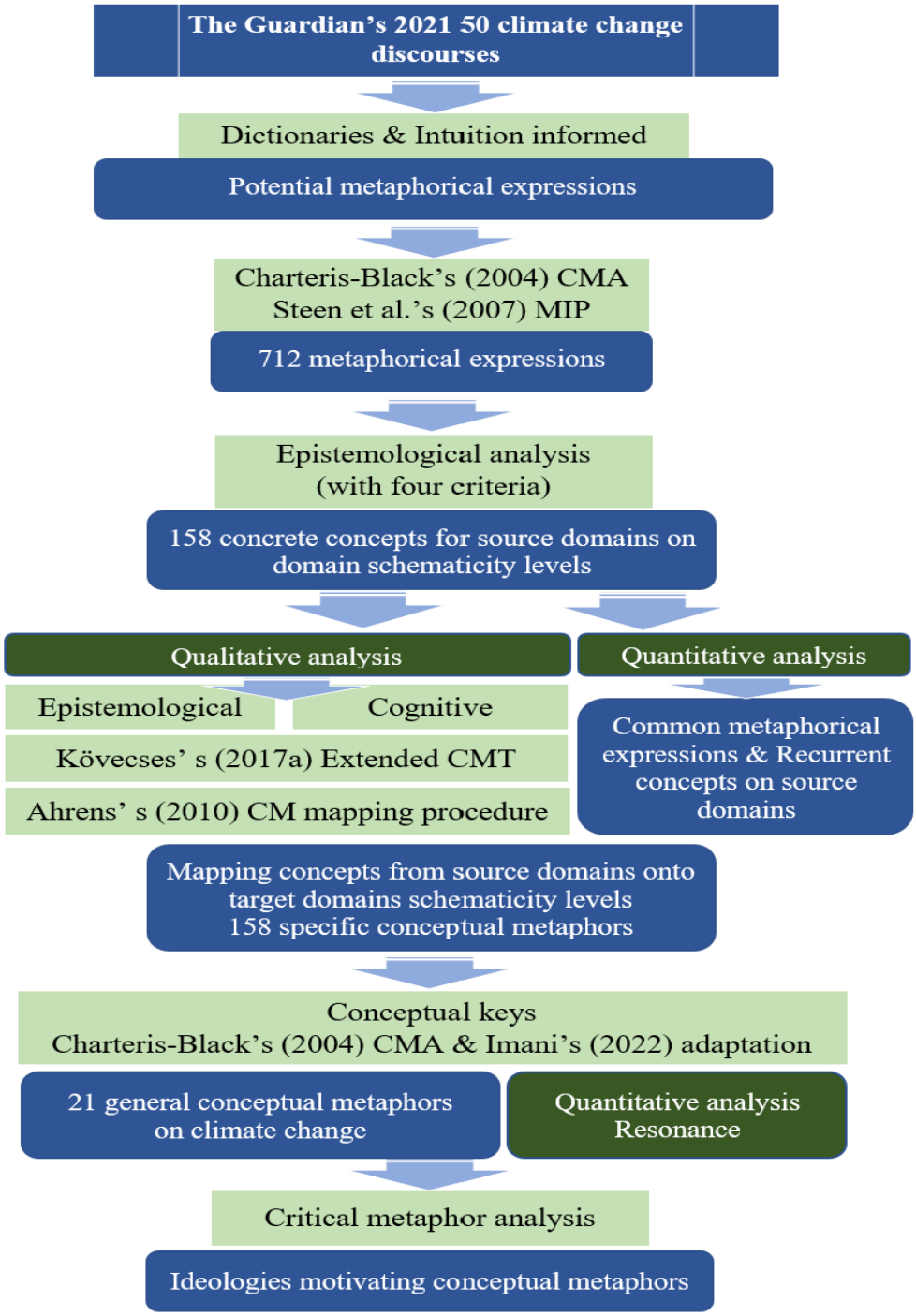
***- Identifying novel conceptual metaphors***

Novel metaphors were identified through a bottom-up inductive procedure. The interpreted conceptual metaphors were compared with metaphor repertoires documented in previous studies Novelty was established when (i) a metaphor had no attested precedent in existing scholarship, (ii) it exhibited a new combination of source-domain structure or mapping logic, or (iii) it reflected a contemporary discursive shift in climate-change framing. Comparing with the previous studies reviewed in the previous chapter, the present study identified six generic conceptual metaphors as novel among ten generic conceptual metaphors having the most dominant metaphorical expressions evoking general conceptual metaphors.

### 3.4.6. Inferring ideologies motivating conceptual metaphors

The final stage employed a critical-discursive orientation to infer ideological stances encoded in the metaphor system. This activity allowed the study to move beyond linguistic description toward a socio-cognitive understanding of how metaphors shape climate-change perception in public communication. Ideologies were not interpreted at the level of individual authors but at the level of institutional voice, reflecting the aggregated stance of The Guardian's climate-related discourse.

Figure 3.03 below summarizes the data analysis process of the study by visualizing the process.




### 3.5. Expert consultation

To enhance the analytical reliability and validity of the conceptual metaphor analysis within climate change discourses, an expert cross-checking protocol was rigorously implemented, of which two external experts in conceptual metaphor studies acted as co-validators of the process of analyzing conceptual metaphors of the study. From a methodological perspective, the involvement of two external experts in conceptual metaphor studies, acting as co-validators, serves two critical objectives derived from standard research practice, consisting of (a) inter-rater reliability, and (b) interpretive and conclusion validity.

### 3.6. Trustworthiness of the study

By addressing *credibility, transferability, dependability,* and *confirmability*, this study demonstrates a high level of methodological rigor appropriate to a qualitatively driven, corpus-assisted research design. These criteria collectively establish the trustworthiness of the study and support the robustness of its interpretations of conceptual metaphors in climate change discourse.

# CHAPTER IV
# DATA ANALYSIS AND DISCUSSIONS OF FINDINGS

This chapter reports the results of data analysis and discusses the findings that the author comes up with in the process of analyzing the articles used in the study.

## 4.1. Data analysis

To uncover conceptual metaphors related to climate change within The Guardian's 2021 editorial discourses on environmental protection, the analysis in this section proceeds through a structured sequence of stages designed to identify, interpret, and contextualize metaphorical language for addressing the research question #1 formulate in Chapter I and its two sub research questions, as follows:

***RQ #1***. What conceptual metaphors of climate change are generated by the metaphorical expressions in the environmental protection discourse?

1.1. What are the most common and recurrent source domains for the climate change?

1.2. How are the source domains mapped onto the target domain?

### 4.1.1. Analyzing metaphorical expressions

Applying Charteris-Black's CMA (2004) and Steen et al.'s (2007) MIP, with the help of Sketch Engine online application and the qualitative software MAXQDA 26.0, the study found 712 metaphorical expressions in "KIM OANH Climate change corpus", which comprises 50 articles extracted from The Guardian, consisting of 49 for the focus CAUSE, accounting for 6.88%, 320 for the focus IMPACT, accounting for 44.98%, and 343 for the focus ACTION, accounting for 48.17%. This quantitative descriptive statistic indicates that the data corpus focuses primarily on the impacts of climate change and the mitigative actions required to sustainably address existing and future environmental damage.

### 4.1.2. Epistemological analysis of metaphorical expressions

Applying the epistemological analysis across the four criteria established in the previous chapter, the study identified 158 corresponding specific concrete concepts from the 712 metaphorical expressions. Among these corresponding patterns, WAR has highest frequency with 102 instances (11.18%), of which three instances for the focus CAUSE, accounting for 2.94%, 52 instances for IMPACT (50.98%) and 47 instances for ACTION (46.08%); the pattern JOURNEY takes the second place with 80 instances (8.77%), the pattern MOVEMENT takes the third place with 66 instances (7.24%).

### 4.1.3. Most common and recurrent source domains for the climate change

At the image schema level, the figures reveal a clear dominance of the FORCE schema, with 297 times of appearance, accounting for 41.71%, of which 14 for CAUSE, 165 for IMPACT and 118 for ACTION, suggesting that climate change is frequently conceptualized in terms of dynamic interactions, pressures, and resistances. At the domain level, the concept of WAR/CONFLICT is dominant, with 110 times of appearance, accounting for 15.45%, of which 55 for ACTION, three for CAUSE and 52 for IMPACT, emphasizing urgency, adversarial dynamics, and the need for defense or resistance.

These metaphorical structures collectively frame climate change as a dynamic, adversarial, and goal-oriented process driven by human agency and requiring strategic intervention, reflecting deep cognitive and cultural patterns that shape how climate change is understood, communicated, and acted upon.

### 4.1.4. Interpreting conceptual metaphors

At the image-schematic level, metaphorical meaning is grounded in embodied experience, revealing the basic physical and perceptual structures that motivate metaphorical reasoning. The domain and frame levels represent relatively stable, "offline" conceptual models that mediate between universal embodied patterns and culturally or linguistically conventionalized meanings. These levels enable the analysts to distinguish between more general, decontextualized mappings and their contextually structured realizations. By contrast, the mental-space level captures highly localized, pragmatic, and real-time construals, reflecting how standard metaphors are dynamically modified in specific discourse situations.

Based on 712 metaphorical expressions and the three foci, the cognitive analysis ultimately identified 158 conceptual metaphors at this level. Among these, CLIMATE ACTION IS A WAR was the most frequent (102 instances), followed by CLIMATE ACTION IS A JOURNEY (80 instances), CLIMATE ACTION IS A MOVEMENT (66 instances), CLIMATE ACTION IS A THREAT (59 instances).

### 4.1.5. Grouping general conceptual metaphors

From the 158 conceptual metaphors identified, many were found to invite similar ways of understanding and responding to climate change, despite differences in source-domain realization or framing. To facilitate higher-level interpretation, the 158 conceptual metaphors were grouped into generic conceptual metaphors by three following interrelated criteria:

i. the presence of a shared conceptual key or motivational logic;
ii. common experiential grounding as established in the epistemological analysis; and
iii. functional equivalence in discourse.

To account for the systematic regrouping of the 158 specific conceptual metaphors into higher-level categories, the analysis further identifies a set of conceptual keys underlying metaphor use in climate change discourse. These conceptual keys provide the cognitive basis for consolidating the 158 specific conceptual metaphors into 21 general conceptual metaphors, ensuring that the grouping reflects shared motivational structures rather than superficial similarities in source-domain realization.

### 4.1.6. The foci of the conceptual metaphors interpreted

In the present study, the triadic foci of CAUSE, IMPACT, and ACTION play a dual analytical role. First, it functions as a thematic lens guiding the interpretation of metaphorical expressions and the assignment of target domains as CLIMATE CAUSE, CLIMATE IMPACT, or CLIMATE ACTION. Second, the triadic foci provide a discursive perspective for examining how different types of conceptual metaphors foreground distinct dimensions of the climate crisis.

***- The specific conceptual metaphors interpreted***

At the level of specific conceptual metaphors, the analysis identified 158 conceptual metaphors derived from 712 metaphorical expressions. Quantitatively, the metaphorical expressions associated with CLIMATE CAUSE account for 19 occurrences (2.67%), while those related to CLIMATE IMPACT and CLIMATE ACTION account for 378 (53.09%) and 315 occurrences (44.24%), respectively.

The prominence of impact-oriented metaphors suggests that experiential salience and affective resonance play a central role in making climate change cognitively and emotionally tangible. Conceptual metaphors focusing on CLIMATE ACTION foreground human agency, intentionality, and intervention, framing climate action as a process that unfolds over time, requires coordination, and involves strategic choices. By contrast, metaphors related to CLIMATE CAUSE suggests that, within the analyzed discourse, causal explanation is less metaphorically elaborated than impact dramatization or action-oriented framing.

***- The generic conceptual metaphors interpreted***

At a higher level of abstraction, the 158 specific conceptual metaphors were systematically grouped into 21 generic conceptual metaphors based on shared conceptual keys, experiential grounding, and functional equivalence. These generic conceptual metaphors are strongly impact-oriented. Other generic conceptual metaphors are predominantly action-oriented. They conceptualize climate change as a process that can be navigated, shaped, or built through collective effort. A smaller but analytically significant set of generic conceptual metaphors cut across the three foci. These metaphors abstract climate change into more neutral or technical construals, enabling reasoning about accumulation, interaction, management, and understanding.

Overall, the generic conceptual metaphors demonstrates how climate change discourse simultaneously constructs urgency, assigns responsibility, and frames pathways for response.

**4.2. Discussions**

Building on the preceding analysis, the section intentionally aims to address the two research questions:

***RQ #2***. How are the metaphors of climate change conceptualized in terms of the schematicity levels, *image schemata, domains, frames* and *mental spaces* in the environmental protection discourse?

***RQ #3.*** What ideologies motivate the conceptual metaphors of climate change interpreted from the environmental protection discourse?

**4.2.1. Conceptualization of the climate change conceptual metaphors**

To address research question #2, the section will go through three steps, a) cognitive frames with the three foci, b) the procedure of establishing source and target domains from metaphorical expressions, and c) ten dominant conceptual metaphors of climate change interpreted and their conceptual structure.

***- Cognitive frames with the foci of CAUSE, IMPACT, and ACTION***

On the focus of CAUSE, the source domains at the level of image schemata include FORCE, SOURCE/PATH/GOAL, CONTAINER, BALANCE, MOTION, among others. Corresponding target domains encompass CRISIS, PROCESS, SYSTEM/LIMIT, STATE, and STATUS. At the domain level, source domains such as CONFLICT/WAR, DISEASE/ILLNESS, OBJECT/ENTITY, and MOVEMENT/JOURNEY are mapped onto target domains like CLIMATE CRISIS, THREAT, PROGRESS, and PROBLEM. At the frame level, source domains including TIPPING POINT, PHYSICAL OPPOSITION, MORTAL DANGER, and OBSTACLE are aligned with target domains such as RESISTANCE, MITIGATION/ADAPTATION, CLIMATE SKEPTICS/LOBBY, and STABILIZING THE PLANET.

With the focus of IMPACT, on the level of image schemata, the potential source domains are FORCE; SOURCE/PATH/GOAL; REACTION/EMOTION; CONTAINER; etc. and the potential target domains are ECONOMY; ENERGY; DESTRUCTION; CONSEQUENCES; DISEASE/ILLENESS; etc.; on the level of domains, the potential source domains are STRIKE/COLLISION; NATURAL DISASTER; DESTRUCTION; DISEASE/TRAUMA; etc., and the potential target domains are HARM/DAMAGE; CATASTROPHE; FAILURE; NEGATIVE EFFECTS; etc.; on the level of frames, the potential source domains are WOUNDING; COLLAPSE; OVERFLOW; BOUNCE BACK/RECOIL; etc. and the potential target domains are VULNERABILITY; BREAKDOWN; EXCEEDING LIMITS; RESILIENCE/RECOVERY; etc.

With the focus of ACTION, on the level of image schemata, the potential source domains are PATH; CONTAINER; MANIPULATION; SOURCE/PATH/GOAL; etc. and the potential target domains are PERFORMANCE; CONSTRUCTION/BUILDING; WAR/CONFLICT; JOURNEY; PROGRESS; etc.; on the level of domains, the potential source domains are CONSTRUCTION/BUILDING; FIGHTING/WAR; GARDENING/GROWTH; HUNTING; etc., and the potential target domains are

DEVELOPMENT/STRATEGY; EFFORT; PLANNING; ACHIEVEMENT/GOAL; etc.; on the level of frames, the potential source domains are ARCHITECTURAL PLAN; BATTLE; CAMPAIGN; HARVESTING; MAINTENANCE/REPAIR; etc. and the potential target domains are POLICY IMPLEMENTATION; DEFEAT; VICTORY; BENEFIT/OUTCOME; SUSTAINABILITY; etc.

***- Establishing source and target domains from metaphorical expressions***

The second stage of the process of interpreting conceptual metaphors related to analyzing the context meaning of 712 metaphorical expressions. With each metaphorical expression, relating to the foci and considering the semantic, pragmatic, and contextual tensions, the process of interpreting conceptual metaphors was done as (i) At the image schema level, the metaphorical expression maps the embodied schema onto the abstract sense of a quality; (ii) At the domain level, the abstract concept is mapped from the concrete domain; (iii) At the frame level, the systematic correspondences are established; and (iv) At the mental space level, the specific source entity maps situationally and pragmatically onto the specific target entity.

***- Climate change conceptual metaphors and their conceptual structure***

The discussion will focus on how these metaphors contribute to the conceptualization of climate change across four distinct cognitive levels of *image schemata, domains, frames* and *mental spaces*.

**(1) CLIMATE CHANGE IS A WAR/CONFLICT**

The concept WAR/CONFLICT is the topic of five specific conceptual metaphors CLIMATE ACTION AS A PHYSICAL TARGET; CLIMATE ACTION AS A STRUGGLE; CLIMATE ACTION AS A TARGET; CLIMATE ACTION AS A WAR; and CLIMATE ACTION AS DEATH. This concept takes the highest number of metaphorical expressions evoking conceptual metaphors with 110 metaphorical expressions. Metaphorical expressions evoking the conceptual metaphor focus chiefly on IMPACT (47.17%) and ACTION (50.00%). The metaphor emphasizes urgency, conflict, and collective effort of environment protection activities. Climate change becomes the enemy; policymakers, scientists, and activists are soldiers or commanders; mitigation strategies and technologies are weapons; and the Earth or global policy arena is the battlefield. The desired victory corresponds to success in curbing emissions and achieving sustainability, while defeat represents environmental collapse. This mapping emphasizes urgency, struggle, and collective mobilization, evoking strong emotional engagement.

**(2) CLIMATE CHANGE IS A THREAT**

The concept THREAT, activated by 89 metaphorical expressions, with 80.90% of IMPACT, is the topic of the 13 conceptual metaphors. This framework conceptualizes the climate crisis primarily through the lens of danger, harm, and vulnerability, confirming the writers' goal of creating a pervasive sense of mortal risk and necessary defense, making the argument for urgent, protective action against the destructive forces of the crisis. The metaphor triggers the fundamental cognitive response of PROTECTION and DEFENSE, justifying aggressive preventative measures, stricter regulations, and significant financial investment as necessary acts of defense against an external aggressor. The metaphor also highlights the fear, vulnerability, and risk associated with climate change.

**(3) CLIMATE CHANGE IS A JOURNEY**

This concept takes 88 metaphorical expressions, of which the focus of ACTION accounts for 89.77%. The metaphor organizes the writers' thinking around long-term strategy, intentional direction, and the continuous effort needed to address the climate crisis. The conceptual metaphor CLIMATE CHANGE IS A JOURNEY provides a powerful narrative structure for the discourse and the high number of metaphorical expressions (88) confirms that the JOURNEY topic is a robust and systematic conceptualization that organizes the writers'

thinking around long-term strategy, intentional direction, and the continuous effort needed to address the climate crisis. This metaphor conceptualizes climate action as a gradual, goal-oriented process.

**(4) CLIMATE CHANGE IS MOVEMENT**

The grouping of MOVEMENT with 12 specific conceptual metaphors serves to establish the general conceptual metaphor CLIMATE CHANGE IS MOVEMENT, activated by 80 metaphorical expressions, of which the foci of IMPACT and ACTION are dominant with 37,50% and 40.00%, respectively, and being a systematic lens through which the writers communicate the dynamic nature, the need for rapid acceleration, and the fundamental, systemic change required to address the climate crisis.

The metaphor emphasizes dynamism and unstoppable progression, constructing climate change as a dynamic force in motion, symbolizing change itself. Its direction indicates warming or cooling trends, its speed represents the rate of change, and its force corresponds to the driving factors such as human emissions or industrialization.

**(5) CLIMATE CHANGE IS CONSTRUCTION**

This framework conceptualizes the climate crisis not merely as an external threat or a journey, but as a physical, established structure that is either being built (action/cause) or is deteriorating/collapsing (impact) by defining stability, instability and confinement in the source domains at different levels, allowing the writers to blend the necessity of building durable, structural solutions with the acknowledgment of imminent, destructive collapse, all while positioning the process as a high-stakes, public performance.

This metaphor shifts the narrative from helplessness to empowerment, framing climate action as a constructive endeavor rather than a reactive one, suggesting human agency and responsibility in "constructing" or "rebuilding" climate systems.

**(6) CLIMATE CHANGE IS COMPETITION**

The concept COMPETITION are activated by 34 metaphorical expressions, of which no metaphorical expressions refers to the focus CAUSE while 23 metaphorical expressions are for IMPACT (67.65%) and 11 metaphorical expressions are for ACTION (32.35%). This framework is highly significant because it conceptualizes the climate crisis through the lens of performance metrics, rivalry, and winning/losing, a perspective largely absent or distinct from previous studies, confirming its role as a systematic, organizing metaphor that structures the climate discourse around measurable performance, urgent rivalry, and strategic play among global actors.

This metaphor aligns with neoliberal discourses of market competition, potentially reinforcing economic hierarchies while promoting technological advancement. In this way, the writers utilize highly internalized and motivating cognitive frames of motivation through challenge, focusing on breaking records and surpassing limits appeals to the human drive for achievement and excellence, and clear metrics and success, providing clear, quantifiable benchmarks for success.

**(7) CLIMATE CHANGE IS A LIVING BEING**

The concept A LIVING BEING is the topic generalizing for ten conceptual metaphors, activated by 33 metaphorical expressions, of which the focus IMPACT takes the majority with 78.79%, accounting for 26 metaphorical expression. The framework is exceptionally powerful and novel because it personifies the climate crisis, giving the framework agency, a life cycle, and a set of behaviors typically associated with humans or animals, providing the writers with a powerful tool to generate empathy, fear, and a sense of profound, personal responsibility for the growth and behavior of both the crisis and the ensuing action.

By humanizing the planet, this metaphor deepens emotional resonance and may inspire more compassionate environmental behavior. By doing so, the general conceptual metaphor CLIMATE CHANGE IS A LIVING BEING

provides the writers with a powerful tool to generate empathy, fear, and a sense of profound, personal responsibility for the growth and behavior of both the crisis and the ensuing action. The conceptual metaphor humanizes the climate, evoking empathy and moral responsibility.

**(8) CLIMATE CHANGE IS A TOOL/INSTRUMENT**

The conceptual metaphor CLIMATE CHANGE IS A TOOL/INTRUMENT is established by grouping nine specific conceptual metaphors, are activated by 31 metaphorical expressions, among them 26 are for the focus ACTION, explaining for 83.87%, and five are for the focus IMPACT, explaining for 16.13%. This framework is significant because it conceptualizes both the solution and the impact through the lens of function, precision, and application, a conceptualization identified as novel in climate change discourse studies, structuring the discourse around efficiency, precision, technical control, and the focused necessity of reducing emissions through targeted interventions. This metaphor reveals how climate discourse can be co-opted for various agendas, highlighting the intersection of environmental and political rhetoric. The TOOL/INSTRUMENT frame offer highly distinctive and utilitarian perspectives on the climate crisis

**(9) CLIMATE CHANGE IS REACTION/EMOTION**

The concept REACTION/EMOTION is the topic generalizing for 11 conceptual metaphors, are activated by 23 metaphorical expressions, comprised of 14 IMPACT ones (60.87%) and nine ACTION ones (39.13%). This framework is highly significant because it conceptualizes the climate crisis and the necessary response through a psychological and affective lens, moving the discourse away from purely physical or technical domains into the realm of internal human experience. The concept REACTION/EMOTION is identified as new for framing the climate crisis itself, making it critical findings, different from previous works. Thus, the general conceptual metaphor CLIMATE CHANGE IS A REACTION/EMOTION is crucial for understanding how the orator frames the climate crisis as a deeply personal, morally charged, and psychologically demanding ordeal that requires reflection, vision, and enduring strength. The metaphor evokes emotive and anthropomorphic imagery, connecting nature to human feeling.

**(10) CLIMATE CHANGE IS COMMUNICATION**

The grouping of 21 metaphorical expressions, four for CAUSE (19.05%), six for IMPACT (28.57%) and 11 for ACTION (52.38%), under the topic COMMUNICATION of nine specific metaphors establishes the general conceptual metaphor of CLIMATE CHANGE IS COMMUNICATION. This framework is highly significant because it conceptualizes the climate crisis primarily through the lens of information transfer, message clarity, and networked interaction, a perspective identified as novel in existing climate discourse studies, confirming the writers' strategic focus on the rhetorical battleground of the climate crisis, emphasizing that successful action requires clarity of signal, urgency of warning, and mastery of the core narrative. This metaphor aligns with contemporary concerns about misinformation and the role of media in shaping climate narratives.

In addition to the ten generic conceptual metaphors previously identified, the study has uncovered 11 additional generic conceptual metaphors that further enrich the metaphorical landscape under investigation. These newly identified metaphors contribute to a more comprehensive understanding of the cognitive mechanisms underlying metaphorical language use in the analyzed corpus.

### 4.2.2. Ideologies motivating the conceptual metaphors interpreted

This thesis adopts a socio-cognitive and critical perspective on ideology, viewing it not as a mere political bias or "false consciousness," but as a fundamental system of thought and values that structures social reality.

Conceptual metaphors embedded in climate discourse, therefore, are not ideologically neutral, but operate as key cognitive sites where ideology is both encoded and enacted.

- ***Ideologies reflected in the climate change foci***

Across the three analytical foci of CAUSES, IMPACTS, and ACTIONS, the conceptual metaphors reflect corresponding ideological orientations.

- ***Responsibility ideology relating to causal frame:*** These metaphors embody an ideology of responsibility and urgency, viewing that human actions are ethically responsible for environmental degradation and positioning humanity as both aggressor and protector, promoting moral awakening and mobilization toward corrective action.
- ***Humanitarian and eco-centric ideology relating to impact frame:*** Metaphors reconfigure power relations between humans and nature, replacing domination with coexistence, and reframing the planet as a moral rather than mechanical entity.
- ***Reformist and pragmatic ideology relating action frame:*** Metaphors articulate a reformist and utilitarian ideology centered on innovation, cooperation, and resilience. The metaphors reflect faith in technological and institutional capability, whereas competition introduces elements of neoliberal rationality that link ecological responsibility to progress, efficiency, and global leadership.

- ***Ideologies continuum and evolution of framing***

The ten major conceptual metaphors identified constitute an ideological continuum extending from alarmist mobilization to collaborative transformation. Traditional metaphors, CLIMATE CHANGE IS A WAR, CLIMATE CHANGE IS A THREAT, CLIMATE CHANGE IS A JOURNEY, and CLIMATE CHANGE IS A MOVEMENT, correspond to ideologies of urgency, collective struggle, and mobilization. Emerging metaphors, in contrast, represent more adaptive and emotionally nuanced ideologies.

- ***Ideological negotiations***

From a critical discourse perspective, these metaphors also function as instruments for negotiating power and agency. WAR and THREAT metaphors authorize centralized action and governmental control, legitimizing emergency interventions in the name of planetary protection. COMMUNICATION and LIVING BEING decentralize authority, foregrounding citizen participation and ethical interdependence between human and non-human actors. COMPETITION and CONSTRUCTION metaphors embody technocratic optimism and policy rationality. A LIVING BEING and REACTION/EMOTION metaphors expresses that A LIVING BEING metaphors redistribute agency by positioning humans as caretakers within a shared ecological community, foregrounding interdependence, the counterpart, in contrast, cast the environment as a volatile actor whose “responses” require expert interpretation, thereby reinforcing institutional authority over climate risk. CONTRUCTION and A TOOL/INSTRUMENT, on one part, legitimize centralized planning and systemic transformation, aligning with technocratic visions of structured societal redesign, the other metaphors, meanwhile, disperse agency by framing climate action as a matter of selecting and applying effective instruments, while still privileging those actors who control or define these tools. Together, these metaphors delineate a complex ideological field where power oscillates between institutional governance and collective civic agency.

- ***Integrative ideological tendencies***

The ideological configurations emerging from the interpreted conceptual metaphors in The Guardian’s climate change discourse represent a complex synthesis of moral, pragmatic, and ecological orientations. Rather than operating as discrete ideological systems, these tendencies interact dynamically, forming a multidimensional

framework that reflects the newspaper's commitment to both cognitive persuasion and ethical engagement. The ideological tendencies comprise (i) moral responsibility and environmental justice, (ii) reformist pragmatism and adaptation, and (iii) ecological reflection and emotional engagement. This triadic ideological structure demonstrates how The Guardian's climate discourse integrates cognitive, emotional, and moral appeals to foster both awareness and action. The interplay among these ideologies constructs what might be termed a transformative environmental ideology, a hybrid paradigm combining cognitive awareness, moral urgency, and affective solidarity. By combining moral appeal, pragmatic rationality, and ecological empathy, the newspaper's metaphorical framing advances a vision of climate change as both a technical and moral project, a shared journey toward systemic transformation, structuring our understanding while simultaneously constructing a social reality aligned with progressive, democratic, and globally responsible environmental values.

- ***The shift of ideological communication with the metaphors interpreted***

The conceptual metaphors interpreted from The Guardian's climate discourse reveal not only a diverse metaphorical repertoire but also a noticeable ideological transition in how climate change is framed, understood, and emotionally processed. Traditional metaphors construct climate change as a destabilizing force that demands immediate action, moral vigilance, and collective mobilization. The emergence of the six novel metaphors signals a shift toward more relational, reflective, and psychologically attuned modes of climate communication. Instead of situating climate change as a hostile antagonist, these metaphors conceptualize it as an entity or process that humans can interact with, learn from, and adapt alongside. Together, these metaphors, traditional and novel, signal an ideological evolution in climate discourse, from endurance to struggle, from expectancy to comprehension, from governance to empathy, from fear-based mobilization to reflective resilience, and ultimately from confrontation to coexistence, the shift discursively mirrors a broader ideological reorientation in climate change communication. Ultimately, this shift demonstrates how metaphorical innovation can reshape ideological orientations toward climate change, enabling more holistic, human-centered, and emotionally intelligent narratives that support long-term societal transformation.

### 4.3. Comparing with the studies reviewed

The present study differs from the studies reviewed in that it systematically integrates these metaphors into higher-order patterns based on their cognitive, discursive, and ideological functions:

- ***Analytical focus***: The present study shifts the analytical emphasis from semantic content alone to the discursive purpose of metaphors, grouping them according to how they function to diagnose problems, propose solutions, justify policies, project futures, or assign moral.
- ***Level of abstraction***: The present study introduces an additional meta-analytical layer by clustering specific conceptual metaphors into higher-order metaphor patterns
- ***The treatment of ideology***: The present study makes explicit connections between metaphor patterns and dominant ideological orientations.
- ***Comparative potential***: The pattern-based model developed in this study offers methodological advantages over more source-domain-specific approaches.

## CHAPTER V: CONCLUSTION

This final chapter concludes the entire dissertation through four distinct sections.

### 5.1. Summary of the study

The study examines metaphorical language as a central cognitive and discursive mechanism through which abstract environmental phenomena are rendered intelligible, evaluative, and action-oriented. Empirically, adopting a primarily qualitative, corpus-assisted research design, the analysis, based on a corpus of fifty climate change-related articles published in The Guardian in 2021, combines Charteris-Black's (2004) CMA and Steen et al.'s (2007) MIP to identify metaphorical expressions and then integrated within Kövecses's (2017c) four-level schematicity framework, proceeding on Ahrens's (2010) Conceptual Metaphor Mapping Model to interpret conceptual metaphors. Quantitative frequency analysis is employed in a supplementary role to identify recurrent patterns and salient source domains.

The research shows how metaphors are conceptualized hierarchically from embodied image schemata to domains, frames, and discourse-specific instantiations of mental spaces, and how these metaphorical structures are ideologically motivated to frame climate change as an urgent, morally charged, and action-demanding global issue. More importantly, the analysis comes up with the shift in ideological communication between the traditional and novel conceptual metaphors, reorientating from fear-based mobilization to reflective resilience as well as from confrontation to coexistence.

### 5.2. Implications

Beyond contributing theoretical and empirical insights into metaphor, the study offers a set of analytic, methodological and practical implications.

#### 5.2.1. Analytic implications:

The study illustrates how analytic redundancy in metaphor research can be addressed through principled generalization. Rather than treating a large number of specific conceptual metaphors as isolated findings, the use of conceptual keys allows recurrent metaphorical tendencies to be identified and interpreted at a higher level of abstraction.

#### 5.2.2. Methodological implications:

The study contributes to ongoing discussions about the design of conceptual metaphor analysis by demonstrating the advantages of integrating bottom-up and top-down analytical perspectives.

#### 5.2.3. Practical implications:

The findings of this study carry a range of practical implications that extend beyond linguistic analysis to broader domains of climate change communication, education, policymaking, and public engagement. The implications are therefore multidimensional, addressing cognitive, communicative, educational, and policy-oriented dimensions for …

(i) environmental communication and journalism,
(ii) climate education and public awareness,
(iii) policymaking and institutional discourse,
(iv) interdisciplinary research and discourse analysis, and
(v) social and behavioral change.

### 5.3. Limitations of the study

Despite the rigorous methodological design and systematic analytic framework employed in this study, several limitations must be acknowledged that may affect the generalizability and interpretive scope of the findings. First, based exclusively on fifty articles published in The Guardian in 2021, the conceptual metaphors identified may reflect the ideological orientation and stylistic tendencies of this particular publication in such a period rather than representing a broader spectrum of environmental discourse. Second, the study relies on English-language texts and metaphorical expressions, which introduces potential cross-linguistic and cross-

cultural bias. Third, the identification and interpretation of metaphorical expressions involve a degree of subjective judgment, even though the study employed established procedures such as MIP and CMA, and included cross-validation by multiple reviewers. Fourth, the study focuses primarily on metaphorical expressions related to climate change, which may limit its applicability to other environmental themes such as biodiversity, pollution, or sustainability. Fifth, the corpus size, though substantial for qualitative analysis, may still be insufficient to capture the full range of metaphorical variation present in climate discourse. Finally, being born and growing up in a province in Central Vietnam, the researcher has observed many disasters caused by the environment. Moreover, the author herself has joined many activities for the movement of environment protection. This may cause bias in the results of the study, especially the configuration of conceptual metaphors.

**5.4. Recommendations for future research**

Upon the limitations identified in the previous section, the dissertation author would like to propose some recommendations to guide future research in the field of conceptual metaphor. Firstly, future studies should consider expanding the scope of data sources beyond a single media outlet. Secondly, researchers are encouraged to adopt a cross-linguistic and cross-cultural perspective. Thirdly, future research may benefit from integrating quantitative methods alongside qualitative analysis. Fourth, expanding the thematic scope of analysis beyond climate change to include other environmental domains, such as biodiversity loss, pollution, renewable energy, or sustainability, would enrich the understanding of metaphorical framing in environmental communication. Fifth, future studies could explore the reception and impact of metaphorical framing on different audience groups. Lastly, researchers may consider longitudinal studies that trace the evolution of metaphorical framing over time.

In conclusion, future research should aim to broaden the methodological, linguistic, and thematic horizons of metaphor analysis in environmental discourse. Such efforts will contribute to a more nuanced and inclusive understanding of how language shapes our engagement with the ecological challenges of the 21st century.

**LIST OF PUBLISHED STUDIES**

Hoang Thi Kim Oanh (2022). Conceptual metaphor in environmental discourses. *2022 International Graduate Research Symposium,* 1031-1039. University of Languages and International Studies, VNU: Vietnam National University Press, Hanoi.

Hoang Thi Kim Oanh (2023). Environment and nature under the perspective of conceptual metaphor theory. *2023 International Graduate Research Symposium,* 1383-1395. University of Languages and International Studies, VNU: Vietnam National University Press, Hanoi.

Hoang Thi Kim Oanh (2024). Environment and nature under the perspective of conceptual metaphor theory. *International Journal of Language and Literary Studies, 6(3), 1–15.* Tawasul International Centre for Publishing, Research and Dialogue Via Della Molara 20, Rocca Priora, 00079, Rome, Italy.

Hoang Thi Kim Oanh (2024). An Empirical Qualitative Study on Multi-Level Metaphors with Climate-Change Frames. *YMER, 23(10)*, 176-193. University of Stockholm.

Hoang Thi Kim Oanh, Edwin Creely (2024). The Complexities of Being a Professional Woman: An Autoethnographic Narrative Study of a Female Vietnamese English Language Academic, 439-461. In: Chowdhury, R., Tuan, H.A. (eds) *Engaging with Australasia: Comparative Research on ELT and English Teacher Education*. Palgrave-Macmillan.

Huynh Anh Tuan, Hoang Thi Kim Oanh (2026). Ideologies motivating conceptual metaphors of climate change in the Guardian's discourse. *Evolutionary Studies in Imaginative Culture. (*Accepted for publication, Scopus Q2, ISSN: 2472-9884)