Babeș-Bolyai University Cluj-Napoca
Faculty of Political, Administrative and Communication Sciences
Doctoral School of Administration and Public Policies

SUMMARY OF DOCTORAL THESIS

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Cluj-Napoca
2024

Babeș-Bolyai University Cluj-Napoca
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Learning And Unlearning Sustainability

Towards a Conscious Use of Language in Sustainability Policies

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Keywords:

sustainability discourse; policy language; ecolinguistics; conscious policy language; sustainability consciousness; computational linguistics; policy communication; sustainability policies; language patterns.

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Research Overview

The thesis, "Learning and Unlearning Sustainability: Towards a Conscious Use of Language in Sustainability Policies," explores the critical issue of sustainability in public policy through the lens of conscious language use. The research proposes a novel conceptual framework, "Conscious Policy Language," which integrates multiple disciplines, from political science and communication to linguistics and cognitive science. Furthermore, the thesis innovatively employs computer-assisted analysis tools to study political discourse. The thesis also seeks to address gaps in the existing literature by identifying linguistic patterns that may hinder the adoption of a sustainable mindset and by proposing solutions to improve communication in public policy, potentially impacting sustainability implementation globally.

The thesis is organized and developed across ten chapters, divided in three parts that focus in an interconnected manner on key research arenas:

Part 1. represents the theoretical framework that aims to describe and bridge sustainability policy literature with linguistics, communication and cognitive sciences for analyzing the underappreciated role of language in sustainability policies, contained in CHAPTER 2 and CHAPTER 3.

Part 2. represents the conceptual framework, introducing a new concept called ‘Conscious Policy Language’ rooted in the bridge created in the theoretical framework, contained in CHAPTER 4.

Part 3. represents the methodological and analysis framework that aims to explore methods and tools for testing and implementing the conceptual framework, contained in CHAPTER 6, CHAPTER 7, CHAPTER 8 and CHAPTER 9.

The research thesis also contains an introductory chapter that facilitates a summary and a roadmap of the research, and a concluding chapter that wraps up findings across the analysis chapters, reiterates insights on the conceptual framework proposed and brings together final discussions, conclusions, recommendations and limitations of the research thesis. At the end, appendices and references are meant to map the work done in the background of the research as well as the outcomes of the

analysis chapters which might bring value to other minds interested to test, build upon or add to the field. The roadmap of the research thesis can be consulted bellow:

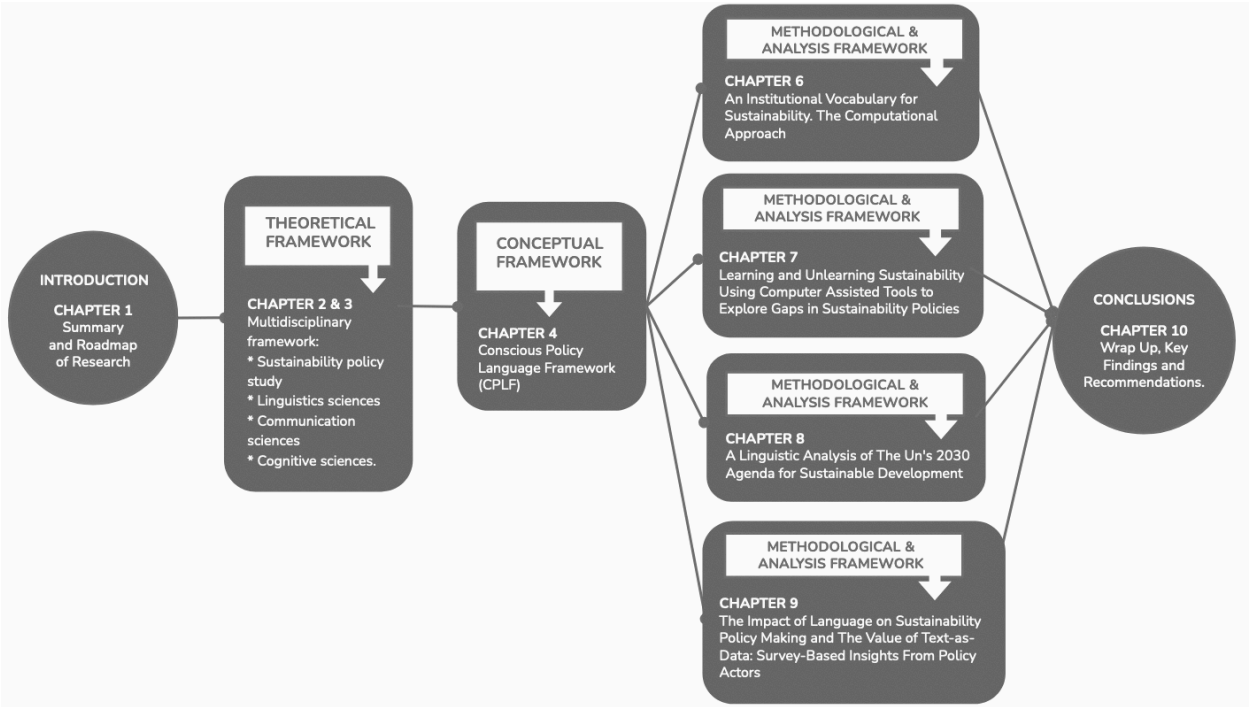

Figure 1. *Roadmap of PhD Research that represents the structure of the thesis, with each chapter marked and briefly described.*

1. SETTING THE CONTEXT OF THE RESEARCH

Problem Statement and Research Questions

After fails on respecting promises and policy goals of the Kyoto-Protocol (1997), the Paris Agreement (2015), or more recently the UNited Nations' Framework Convention on Climate Change (UNFCCC) annual international gathering knows as COP meetings, systematic reviews of the literature generate the understanding that the failure to follow the sustainability agenda is due to economic, political and communication factors (Howes et al, 2016).

The paper will address the latter (i.e. communication factors) by looking at how sustainability is being communicated, using language as the core research arena. An overview of how the language we use, i.e. choice of words has great influence on the way we perceive the world and our behavior on the sustainability path is explored from the perspectives of policy making, communication sciences, cognitive science and linguistics.

The guiding research question of the research thesis is:

Is there a language use in sustainability policy that potentially alters, inhibits or contradicts a sustainable mindset?

The research question is further broken down in each analysis chapter by inquiring over more specific aspects of how different sustainability policies aspects might be misrepresented at language level, namely how are the three sustainability pillars (economic, environmental, and social) debriefed by different sectors discourses (public, civil, media/private) explored in CHAPTER 6; if there are imbalances in how the three sustainable development pillars are represented in policy documents explored in CHAPTER 7; how is the environmental dimension and nature represented in the Agenda 2030 for Sustainable Development explored in CHAPTER 8; how much value do policymakers, experts and other sustainability professionals see in text-as-data and what

is their perception on the impact language may or may not have on the sustainability agenda and its implementation explored in CHAPTER 9; and how can computational linguistics and computer-assisted tools be used in policy analytics to bridge the digital gap in policy research and analysis explored throughout all analysis chapters.

Research Scope and Objectives

The underlying research ambition is to develop, or at least kickstart the development of an empirical design that brings together a novel conceptual framework called ‘Conscious Policy Language’ and a computer-assisted linguistic framework complemented by manual analysis . This empirical design aims to bring awareness to how language is being used in sustainability policies, identify potential language use that may inhibit, alter or contradict a sustainable mindset in order to shift unconscious discourses and create more conscious and effective sustainable development policy-making.

The research aims of the doctoral thesis are to:

(1) Bridge the digital gap in sustainability policy research and analysis using text-as-data.

(2) Bring more awareness on language use in sustainability policy making to improve sustainability policy making and its implementation.

The objectives of the study are to:

O1: Showcase a new analytical framework on policy documents using computer-assisted tools potentials.

O2: Develop the ‘Conscious Policy Language' conceptual framework.

O3: Create a database of framings, narratives, metaphors and sustainability policy lexicon to build dictionaries for future policy analytics.

O4: Initiate a glossary of potential unconscious language patterns in sustainability policy documents and discourses.

O5: Highlight text as valuable data in policy research.

The outlined research aims and objectives are envisioned to lay the ground for identifying core language issues in sustainability policy making by integrating a

multidisciplinary theoretical framework, a novel conceptual framework and diverse analytical tools. The premises of the suggested empirical design seeks not only to reveal potential unconscious language use in sustainability policy that may inhibit, alter or contradict a sustainability mindset, but also make recommendations on language use that promote a more conscious use of language in sustainability policy making.

The thesis ultimately aspires to bridge the gap between sustainability communication and policy effectiveness and better integrate the sustainable mindset of living in harmony with nature, people and the planet nurturing with conscious and informed language choices.

2. Theoretical Framework

First part of the thesis explores A multidisciplinary theoretical framework and a comprehensive literature review sitting at the crossroads of sustainability policy study, communication, linguistics and cognitive sciences. Key concepts such as "sustainability," "conscious language," and "critical discourse analysis" are discussed, along with an exhaustive inventory of theories developed by authors such as R. Atkinson, G. Lakoff, D.A. Schon & M. Rhein, A. Stibbe, Sutton, N. Fairclough, A. Hoffman, M. Halliday, and many others. These theoretical chapters draw attention to the role of cognition in developing public policies and argues that cognition, shaped by linguistic constructions such as metaphors, narratives, and frameworks, significantly influences the decisions and outcomes of public policies. These constructions often operate unconsciously, shaping perceptions and actions in ways that can support or hinder sustainability objectives.

The theoretical foundations bring different learning lenses from policy study, communication sciences, linguistics and cognitive sciences having language as the central focus of study (Figure 1). These are grounded in:

- Policy study and sustainability research to describe the vision, values and principles guiding sustainable development, as well as to set the context

for the sustainable development history to present policy context, introducing research on language and cognition;

- Framing theory with a focus on the study on frames in the policy process;
- Metaphors and narratives studied in the context of sustainability policy discourses;
- Critical Discourse Analysis (CDA) with a focus on sustainability discourse;
- Ecolinguistics with a focus on various linguistic patterns that may inhibit an ecological consciousness, and
- Language Patterns which look at various grammatical constructs and semantics that may further aid to the analysis of language in the context of sustainability policy discourse.

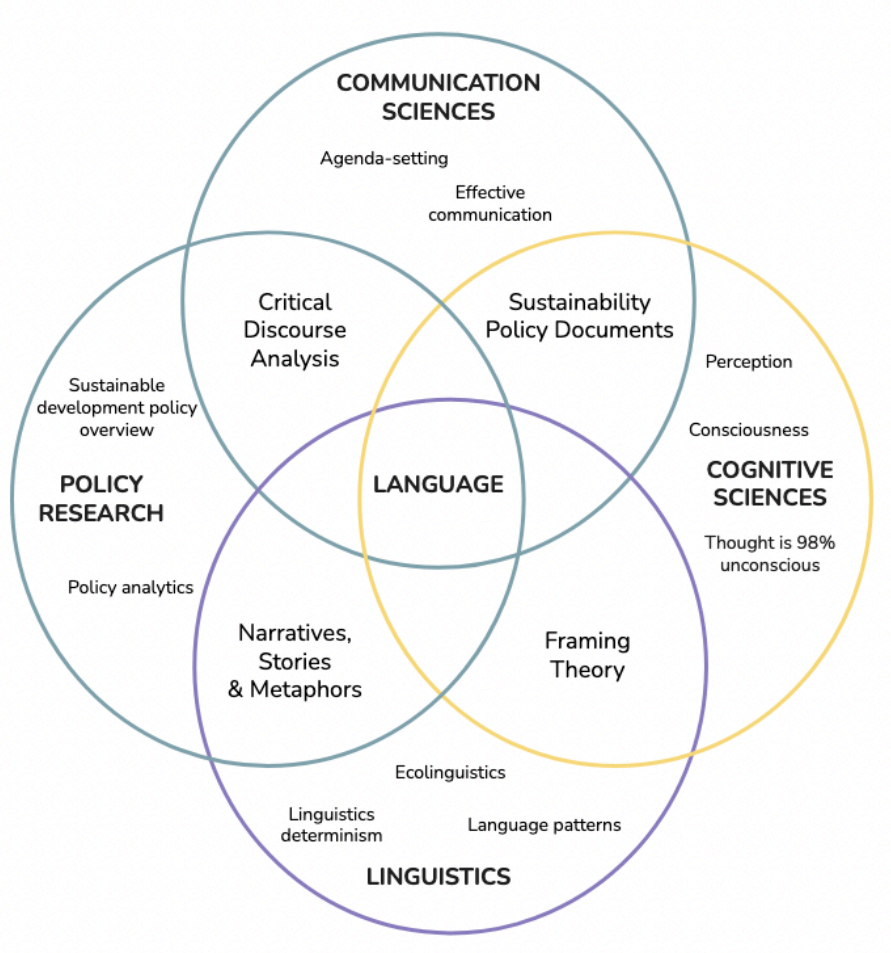

***Figure 2**. Venn Diagram Showing the Multidisciplinary Framework: Cognitive science, Communication Sciences, Linguistics and Sustainability Studies with a Central Focus on Policy Language.*

3. Conceptual Framework

Part 2 of the research brings together the different disciplines presented in the theoretical framework highlighting the need for a new conceptual framework that sits at the intersection between policy study, sustainability research, linguistics and communication and cognitive sciences. The novel framework aims to provide a practical tool for policymakers and professionals in sustainable development. The CPLF critiques traditional rational policy models, discussing their limitations when applied to the field of sustainability and arguing that these models, typically based on data and evidence, often overlook the influence of language in shaping the agenda and public perception. Therefore, the unconscious use of language in sustainability policies can undermine, unintentionally, the original intent of the sustainable development agenda.

The conceptual framework of conscious policy language is contextualized as a proposed paradigm shift in the development of sustainability policies. This framework seeks to align policy language with the sustainability agenda by promoting a conscious use of language that supports sustainability awareness. A series of practical examples of applying this framework are described. The goal of the CPLF is to improve the formulation and implementation of public policies, making language a more deliberate tool for aligning mindset, vision, and action with sustainability objectives.

The CPLF is offering a design and structure for doing policy analytics using computer-assisted tools to detect potential hidden unconscious language patterns that may inhibit, alter or contradict a sustainable mindset and promotes the crafting of a policy language in sustainability policies that is conscious of its intent to be effective and grounded in its goals of creating just relationships with nature, people and planet.

The conceptual framework offers a brief introduction of unconscious uses of language in sustainability policy, challenges whether sustainability policy communication

is incompatible with rational policy models, sets the ground for a paradigm shift towards sustainability consciousness and finally, introduces and describes conceptual foundations, components and applications of the CPFL. The CPLF is visually represented in *Figure 3*, illustrating the relationships between its key concepts, components, processes and applications of the framework.

***Figure 3**. Flowchart illustrating the Conscious Policy Language Framework (CPLF) Roadmap, Conceptual Foundations, Components, Process and Applications.*

3. Methodological and Analysis Framework

Part 3 of the research is using a mixed methodology of linguistic, computer-assisted, deductive and hermeneutic approaches across four chapters of analysis (Figure 4). The mixed-methods approach aims to give a robust analysis of what types of language uses may inhibit, alter or contradict a sustainable mindset and allows for triangulation of insights across the different data sources.

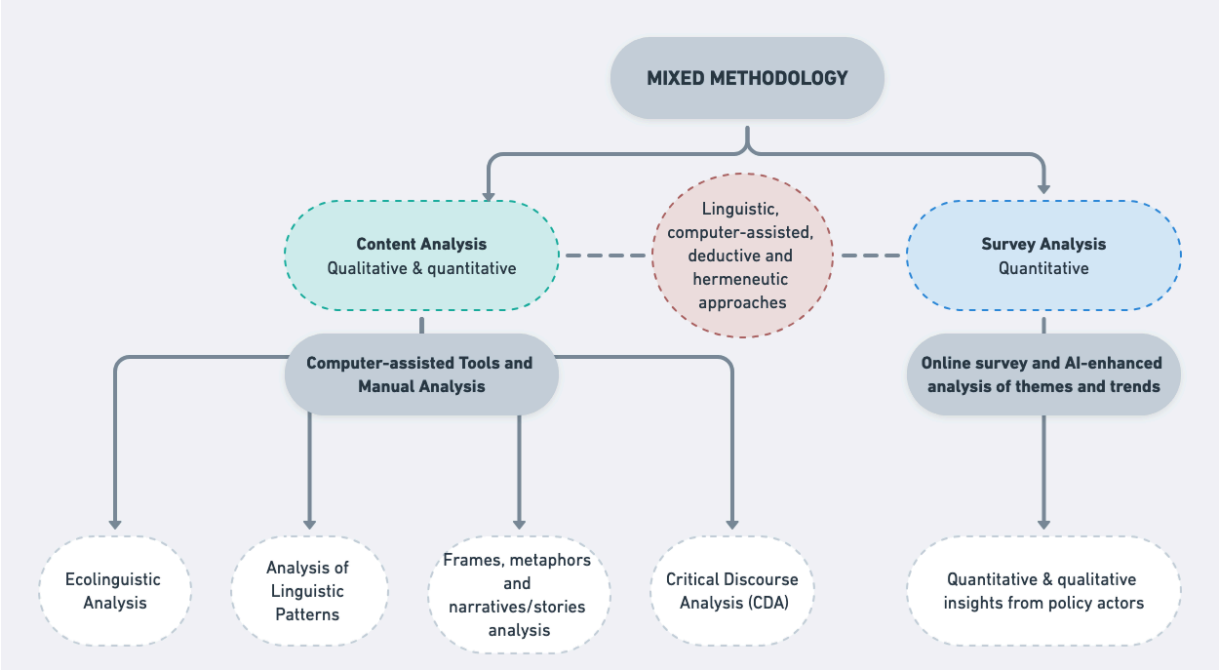

***Figure 4**. Diagram outlining the mixed-methods approach, with branches showing content analysis methods (e.g., CDA) and quantitative survey method.*
***Source:** Author contribution made with Whimsical iterative workspace*[1]

The methodology of the research employs content analysis and discourse analysis. Content analysis allows systematic analysis of large volumes of textual data to identify patterns and frequency of terms, expressions and topics within a text. The content analysis applied is both quantitative and qualitative, by counting occurrences of words, expressions and categories and by applying thematic analysis to identify frames, narratives or metaphors. Discourse analysis also employs both qualitative and

[1] https://whimsical.com

quantitative with a primary analysis focus on the broader social context in which different textual documents are being active.

The methodological framework represents a playground for testing and implementing the conceptual framework. The approach is designed to comprehensively explore the use of language in sustainability policies, by combining both qualitative and quantitative content analysis and discourse analysis methods. In order to get insights on the potential interest and value of language analysis in sustainability policy discourse, a quantitative data collection is employed via a survey sent to different policy makers, experts and practitioners in the field of sustainability.

The chosen methodology aligns with the research aims and objectives to give a holistic overview of language use in sustainability policy, to bring awareness on different language patterns that may hinder sustainability policy effectiveness, to highlight text as valuable data in policy research and to shorten the digital gap in policy analysis. The specific methods and tools used are described in detailed in each chapter.

Methods used

Several methods are used to analyze content and discourse and include:

Frames, metaphors and narratives/stories analysis - which have a fundamental role in how perceptions and behaviors are created, used to identify and analyze potential terms and linguistic patterns that belong to different unsustainable frames/narratives/stories already identified in the theoretical framework.

Critical Discourse Analysis (CDA) - used to detect different values/assumptions /sentiment embedded in policy language, by focusing on how language use in different contexts of sustainability discourse (public, private, civil) shape different understandings of sustainability and different behavioral reactions to each.

Ecolinguistic Analysis - is used to analyze the ecological implications of language use in sustainability policies, or better said, how a specific may obscure the relationship between the human being and the natural world, how it might

further impact the sustainability vision of living in harmony with nature, people and planet.

Analysis of Linguistic Patterns - different linguistics patterns are used as guiding filters to detect potential unsustainable triggers across policy text. The choice and source of these patterns are from a selected list extracted from literature review.

Survey Analysis - a survey is designed as a complementary qualitative method to gather insights from policy makers, experts and practitioners in the field of sustainability on the potential impact of language use in sustainability policy as well as their potential interest in using language analysis in policy analytics and their potential validation of the concept of 'Conscious Policy Language'.

Tools and techniques used

The analysis chapters are done with a mix of tools and techniques largely based on computer-assisted tools for text mining which involves automatic and semi-automatic Natural Language Processing (NLP) processes that transform unstructured text in documents and data-bases into structured data prepared for analysis or to be used with machine learning algorithms.

The use of these computer-assisted methods is valuable for extracting hidden meaning and patterns that human analysis may miss (processing difficulties and/or does not conform to prior beliefs/ expectations).

Techniques used across the analysis chapters vary and include topic modeling, glossary-based approach, Sentiment analysis, key words in context (KWIC), text analysis softwares for text readability and comprehension scores, as well as manual linguistic analysis using framing analysis, CDA and ecolinguistics analysis and patterns extractions based on predefined lists, as well as an online survey designed for policy makers, experts and practitioners. The specific techniques and tools used are described in each analysis chapter.

The mix of tools and techniques complement each other and iterate an operational process for analysis, while showcasing the potential of their use for policy

analysis and aim of research to bridge the digital gap in policy research and analysis using text as data.

Corpus Selection

In CHAPTER 6, the computer-assisted tools and techniques are used on various mediated text debriefing sustainability discourse from three main types of sources (public, media/priavte and third sector):

- **Public Policy Discourse** - European Union official website, section News & Events.
- **Civil Society Discourse** - Advisory bodies to the UN (Global Ecovillage network website, section News.
- **Media / Private Discourse** - Top media outlets that are somehow distinct in approach and scoring high for popularity in Europe (The Guardian, Politico, The Independent and BBC).

The selection of articles followed a frequency of one article per week over the period of January 2016 to April 2017, resulting in a corpus of 623 articles.

In CHAPTER 7, the computer-assisted approach is further explored on top policy documents at global (United Nations), regional (European Union) and national (National Sustainable Development Strategies) level:

- **United Nations's major agreements & conventions** taken from official website archive.
- **European Union's major agreements & policy documents** taken from official website archive.
- **National SDSs taken from the OECD and European Sustainable Development Network websites,** choosing top six national sustainable development strategies by maturity and implementation success mentioned in 'Report on National Sustainable Development Strategies of OECD Countries' (2006).

In CHAPTER 8, the linguistic analysis is combined with computer-assisted, deductive and hermeneutic approaches to analyze the actual text of Agenda 2030 for Sustainable Development:

- **United Nations' Agenda 2030 for Sustainable Development (2015)** integral policy document taken from UNited Nations Sustainable Development Goals (SDGs) official website.

In CHAPTER 9, the data analyzed comes from data collected via an online survey designed for policy makers, experts and practitioners.

Extraction and data standardization of all data sources and specific corpus characteristics are described in each chapter.

Concluding Chapter: Reflections, Limitations and Recommendations

The conclusion chapter synthesizes the main research findings and provides concrete examples to support the proposed recommendations. It emphasizes the profound impact of conscious language use in sustainability policies, with the research demonstrating that language can influence perceptions and behaviors related to sustainability, and unconscious language can undermine the effectiveness of these policies.

For example, the frequent use of economic terms in policy documents can create an imbalance in the representation of the three pillars of sustainable development (economic, social, and environmental), leading to a distorted perception of the importance of each. The textual analysis conducted in the previous chapters led to the construction of glossaries that include terms and expressions identified as unsustainable or that could undermine sustainability objectives.

Concrete recommendations for integrating a conscious language policy into sustainability policies are proposed, including: systematically auditing public policy texts to identify language that could inhibit or alter a sustainable mindset, creating glossaries of unconscious language used in sustainability policies to support awareness and improve language use in these documents, or strategically reformulating public policy

texts, avoiding crisis narratives, abstract language, or future orientation, which can distract attention from immediate and effective action.

5. Potential and Contribution of Research

The research aims to contribute to the field of sustainable development policy-making by bridging the gap between policy study, linguistic research and novel computer-assisted models of analysis. It explores a multidisciplinary theoretical framework that sits at the crossroads of sustainability policy study and linguistic, communication and cognitive sciences.

The research develops an empirical design aiming to integrate the conceptual framework with innovative methodological approaches rooted in computer-assisted tools and techniques. This empirical design helps to analyze and bring awareness to how language is being used in sustainability policies and identify potential language uses that may inhibit, alter or contradict a sustainable mindset.

The conceptual framework and findings from the empirical design tested by exploring the potential interest in using language analysis in policy analytics, the potential impact of language use in sustainability policy and potential need of a conscious shift in using sustainability policy language by collecting insights from policy makers, experts and practitioners in the field of sustainability.

The findings of the empirical analysis reveal key evidence-based learnings regarding the language use in sustainability discourse and policy documents, namely:

- ★ There is a noticeable imbalance and a disconnect in how sustainability and its three dimensions (economic, environmental and social) are debriefed in the discourses of different sectoral representatives (public, media and third sector).
- ★ There is a great imbalance in how the three sustainable development pillars are represented semantically, revealing a high level of

economic-oriented language use across top policy documents promoting and regulating sustainable development implementation.

- ★ There is a significant use of unconscious language patterns, framing, stories, narratives and semantic categories in the UN' Agenda 2030 for Sustainable Development (2015) that may inhibit the sustainable mindset and its effective policy communication and implementation.
- ★ There is a promising interest of policymakers, analysts, experts, practitioners and other sustainability professionals in the role language use plays in shaping sustainability policies adoption. They also share agreement on the need to increase the use of text-as-data in policy analysis, as well as the potential of adopting conscious language policy guidelines to increase the integration of a sustainability mindset and improve effective policy communication and implementation.

Overall, the potential and contribution of the research lie in the learnings taken, the theoretical, conceptual and methodological frameworks introduced, and the practical outcomes of the research integrated as recommendations, guidelines, actual tools of analysis and glossaries created.