

Representations of the Commodification of the Carbon Market through Cartoon Art Using a Visual Metaphor Approach

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ABSTRACT

The global climate crisis phenomenon has driven the transformation of the ecological function of forests into economic commodities through a carbon exchange mechanism that presents a paradoxical condition between nature conservation efforts and the demands of polluting industrial growth within the framework of sustainable development.. This study aims to analyze the representation of carbon trading as commodification through a visual metaphorical approach in caricature works. Methodologically, this study is an artistic research project that adopts the Art Consortium's creation model through five systematic stages: preparation, elaboration, synthesis, concept realization, and evaluation. This creative process produces works that represent the commodification of the carbon market through visual metaphors. The analysis reveals that the use of visual metaphors simplifies the complex narrative of the green economy into provocative visual messages. The discussion highlights how each visual element functions as a critical tool against the commodification of nature, which is trapped within the interests of global capitalism. In conclusion, this artistic research affirms that caricature is not merely an aesthetic illustration but a medium that demands profound reflection on socio-environmental phenomena.

Keywords: Carbon Market, Cartoon, Visual Metaphor, Artistic Research, Arts Consortium

INTRODUCTION

The global climate crisis, characterized by a significant rise in global temperatures, has spurred the development of various emission mitigation policies, one of which is the carbon market mechanism (United Nations, 2023). This aligns with the global agenda of the Sustainable Development Goals (SDGs), particularly Goal 13 on Climate Action, which calls for immediate action to reduce the global carbon footprint (UNDP, 2023). Fundamentally, "carbon" in this context refers to greenhouse gas emissions (CO₂) generated by industrial and transportation activities that have a detrimental impact on the atmosphere (IPCC, 2022). The carbon market itself is defined as a system for trading carbon emission permits where carbon units are bought and sold as an economic commodity to encourage companies to reduce their ecological footprint (World Bank, 2024). This phenomenon transforms natural functions—which were previously public goods—into quantifiable economic assets through capital market mechanisms (Smith, 2023).

On the other hand, caricature serves as a medium of visual communication capable of critically addressing social and environmental issues. A caricature is defined as a drawing or depiction of a real object that exaggerates its distinctive features, typically for satirical purposes (Marianto, 2019). Another definition describes caricature as a

form of visual distortion that simplifies complex reality into a message that is easy to digest yet rich in meaning (Wright, 2021). The primary function of caricature is as a tool for social criticism and public opinion, aiming to entertain while provoking the audience's awareness of injustice or anomalies (Jones, 2022). The themes addressed in caricatures are vast, ranging from political and economic issues to contemporary environmental concerns (Pratama, 2024).

The creation of the caricature in this study focuses on the theme of the carbon market as a response to the development of green economic policies in Indonesia. This work is part of the participation in the Visual Vest 2025 caricature competition officially organized by the Indonesia Stock Exchange (IDX, 2025). In this competition, the carbon market theme was selected as one of the main pillars to promote the role of the capital market in environmental conservation through the medium of visual art (Indonesia Stock Exchange, 2025). Through this work, the author seeks to visualize the dynamics between the industrial sector and conservation efforts within the framework of formal yet contradictory market transactions.

Academically, this research is a form of artistic research that produces visual artworks through a structured creative process. This creative process follows the model presented by the Arts Consortium, consisting of five systematic stages: (1) preparation, (2) elaboration, (3) synthesis, (4) conceptual realization, and (5) completion or evaluation (Bandem, 2001: 10). Through these stages, the idea of carbon commodities is explored in depth until it materializes in the form of visual metaphors that possess both aesthetic and critical value. In his research, Faturahman, as quoted by Aisyah (2024), found that character depictions can use visual metaphors to represent psychological or social themes as a form of simile. This approach ensures that the resulting artworks have a strong theoretical and methodological foundation within the academic context. Thus, it can be said that the problem of carbon exchange commodification can be conveyed through caricature works produced by following the Art Consortium creation model.

LITERATURE REVIEW

Studies on the green economy confirm that carbon markets have become a key instrument in global efforts to achieve SDG 13 targets, yet they are often criticized for being caught up in the commodification of nature, which reduces the ecological value of forests to mere trading units (Smith, 2023). From a communication perspective, the use of visual metaphors on environmental issues has proven capable of bridging the psychological gap between abstract public policy and the tangible understanding of the general public (O'Neill & Smith, 2023). This is reinforced by the role of political cartoons, which serve not only as entertainment but as provocative visual texts that deconstruct power and ambiguity within climate change policies (Jones, 2022). Furthermore, artistic research indicates that the integration of visual symbolism and social critique in artworks can create a counter-narrative to the hegemony of green capitalism, which often disregards ecological justice (Hansen & Machin, 2022).

METHODOLOGY

This study employs an artistic research methodology that integrates the creative process with academic critical reflection. The procedure for creating caricatures themed around the Carbon Market follows a systematic model formulated by the Arts Consortium, consisting of 5 (five) main stages (Bandem, 2001: 10), as follows:

1. **Preparation Stage.** This initial stage involves the collection of data and information related to the carbon market phenomenon. During this stage, a literature review on carbon trading mechanisms at the Indonesia Stock Exchange is conducted, along with observations of current environmental issues. Preparation also includes gathering visual references such as tree forms, industrial smokestacks, and legal documents as the basis for metaphors (Marianto, 2019).
2. **Elaboration Stage.** This stage involves in-depth analysis of the collected data. The researcher experiments with ideas to uncover connections between industrial elements and nature. In the context of this work, the

elaboration process involves associating “trees” as assets being traded by the exchange authorities (Sudjojo, 2020).

3. **Synthesis Stage.** Synthesis is the process of drawing conclusions from the results of the elaboration to determine the visual focus. At this stage, the conceptual framework is refined into a rough sketch (thumbnail sketch). The researcher decided to use color contrast (green and dark gray) to create a visual contradiction representing the paradox of carbon commodification (Ratna, 2021).
4. **Concept Realization Stage.** This stage involves the technical execution or materialization of the work. The synthesized sketch is transferred to a digital medium using design software. This process involves digital painting techniques to add detail to the textures of the trees, smoke, and the “Carbon Exchange” typography, which resembles landscape elements, thereby making the concept of “commodity” visually tangible.
5. **Finalization or Evaluation Stage.** This final stage involves testing the aesthetics and meaning of the completed work. An evaluation is conducted to ensure that the critical message regarding the carbon market is effectively conveyed to the audience through the visual metaphors used. At this stage, final details are also refined (finishing) before the work is submitted to the Visual Vest 2025 event (Bandem, 2001).

The creative model presented by the Arts Consortium offers several significant advantages in the context of academic research; among them, this model provides a clear structure for artist-researchers to trace their creative journey chronologically, thereby enabling the imaginative process to be scientifically accounted for (Bandem, 2001). Through the elaboration and synthesis stages, this model does not rely solely on technical skill but also demands depth of critical thinking in transforming social issues into works of art (Sudarso, 2022). The inclusion of an evaluation stage allows researchers to measure the relevance of the work to the initial research objectives, ensuring that the resulting visual art is not merely an aesthetic object but a research finding that contributes to knowledge (Hasan, 2024).

DISCUSSION

The result of this artistic research is a caricature titled Carbon Market, which visualizes the mechanism of emissions trading through visual metaphors. The following discussion outlines the process of transforming an idea into a final work based on the stages of creation (Bandem, 2001).

Preparation and Elaboration Stage

In the initial stage, the problem regarding the contradiction between massive industrial activities and environmental conservation efforts was identified. This phenomenon is often viewed as a form of greenwashing, where the carbon market serves as a tool to justify ongoing emissions (Hajer & Versteeg, 2024). During the elaboration phase, the idea emerged to analogize the carbon market as a real-world transaction involving ecosystems. This concept aligns with the theory that visual representations of climate change must bridge the psychological gap between abstract policies and material reality (O'Neill & Smith, 2023). The researchers developed a sketch in which trees (forests) are no longer merely natural objects but assets legally controlled by market authorities to offset industrial pollution.

Synthesis Stage

The synthesis stage involves combining two contrasting worlds: gray industrialism and green conservation. The researchers established the metaphor of “document paper” as a symbol of the carbon market’s legality, which envelops the reality of nature. The use of visual metaphors in an environmental context has proven effective in simplifying complex systemic issues into a provocative narrative that is easily understood by the public (Sert & Ozturk, 2025). The researchers decided to position the typography of “Carbon Market” as an organic element growing from the ground, indicating that this policy has become part of a new ecological structure.

Concept Realization Phase: Analysis of Visual Elements and Design Principles

This phase involves the technical implementation of the concept by detailing the visual elements:

a. Visual Object

Characteristic Tree.

The tree is depicted with strong roots but with small branches that seem to be “surrendering” or “trapped” within the carbon market documents. This symbolizes nature’s bargaining position in the carbon market. It reflects what is known as the commodification of nature, where ecological entities lose their autonomy and are redefined based on economic exchange value (Castree, 2023). The trees are also depicted sucking in smoke as hard as they can. This depiction symbolizes the exploitation of forests, as if forests alone are the solution to air pollution (Figure 1).

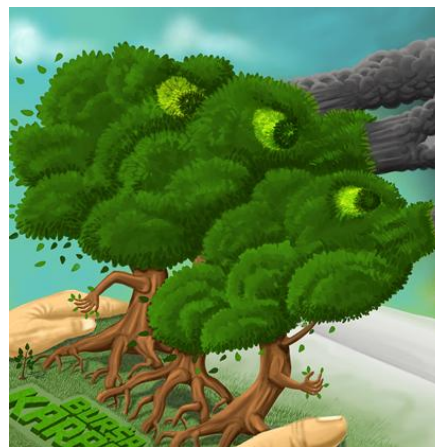


Figure 1. A large tree as a reference

Industrial Chimneys.

The four chimneys on the right represent the industrial sector. The visual metaphor here is evident in the smoke that does not dissipate into the air but is directly connected to the tree canopy, symbolizing the carbon offset process. The smoke coming from the chimney is depicted as a terrifying face. The face, inspired by the Scream mask, is a metaphor for something frightening and threatening: factory smoke. (Figure2).



Figure 2. A chimney and a scream mask for reference

Hands and Document.

A pair of hands holding a large white sheet of paper serves as both a frame and a symbol of bureaucratic control over natural resources. The hand appears to be wearing white clothing, symbolizing the bureaucratic class. Furthermore, the hand is depicted as larger than the tree, symbolizing the immense power wielded by bureaucrats or businesspeople. (Figure 3).

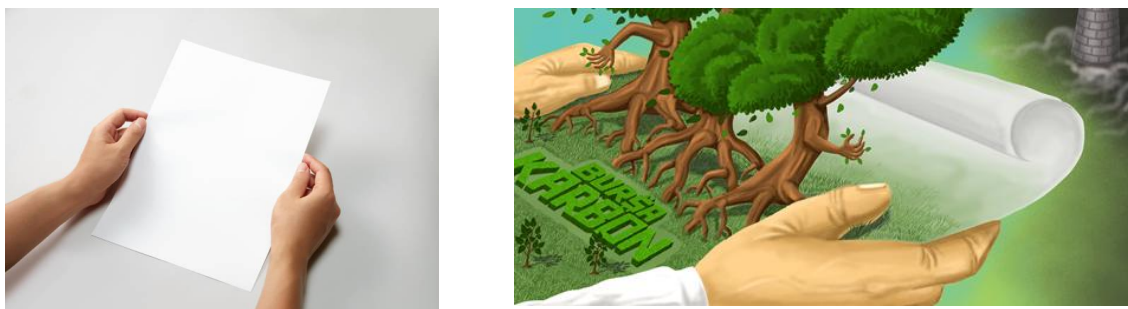


Figure 3. A hand holding a document for reference

b. Visual Elements

Color

The use of a distorted complementary color scheme. The bright green of the trees symbolizes life and hope, contrasted with the dark gray and muted red of the industrial background, which symbolize pollution and destruction (Sudarso, 2022). The use of a distorted complementary color scheme (green vs. gray) serves to create “cognitive tension” in the viewer. The use of extreme color contrasts in environmental digital art has been shown to increase the audience’s emotional engagement with the conveyed message (Luo et al., 2024).

Line

The curved lines in the smoke clouds create a dynamic yet suffocating impression, while the sharp lines on the smokestack convey a rigid and artificial feel.

Texture

The rough texture of the tree bark and the clumpy smoke provide visual depth, making this metaphor feel more “real” and less flat.

c. Design Principles

Contrast

The primary principle employed is the contrast between the left side (nature/green) and the right side (industry/gray). This contrast aims to highlight the paradox of the carbon economy.

Balance

The work employs asymmetrical balance. Although the objects on the left and right differ, the visual mass of the lush tree balances the visual weight of the four smokestacks and the thick plume of smoke.

Emphasis

The point of interest lies at the intersection of the industrial smoke and the tree leaves, framed by the white document. The bright white color of the document in the center of the composition draws the audience’s eye, immediately conveying that this is a “transaction.” Visual emphasis on this area is crucial because, according to visual communication studies, the area where two contrasting elements meet is where the strongest meaning is produced (Kress & van Leeuwen, 2021).

Finalization and Evaluation

The final touches were applied using digital shading techniques to enhance the lighting effects. The evaluation revealed that the use of the visual metaphor of a “tree packaged in a document” successfully conveyed the critique that carbon markets represent a formalized version of the relationship between environmental destroyers and preservers. This caricature successfully fulfills its function as a “visual text” that challenges the hegemony of market discourse in nature conservation (Hansen & Machin, 2022) (Figure 4).



Figure 4. Final cartoon artwork

CONCLUSION AND RECOMMENDATION

Based on the analysis and creative process outlined above, it can be concluded that the caricature “Carbon Market 2025” is not merely an aesthetically pleasing visual artifact but a cultural text that offers a critical perspective on environmental commodification. The caricature functions as a medium of deconstruction that exposes the paradoxes within carbon market policies, where the ecological functions of forests are translated into transactional values within the capital market. Through the use of sharp visual metaphors, this work successfully communicates the tension between the ambitions of industrialization and the urgency of nature conservation. This artistic research also underscores that the creation of substantive artworks requires a deep and comprehensive understanding of the subject matter. The systematic stages, from preparation to evaluation, demonstrate that an artist-researcher must possess strong literacy regarding socio-economic issues to effectively transform abstract concepts into communicative visual symbols. Thus, caricature in an academic context is a fusion of artistic technical skill and intellectual analytical acuity, effectively serving as an instrument of environmental advocacy in the contemporary era.

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