

## VISUALIZING SUSTAINABILITY IN ACCOUNTING: INTEGRATING PHOTOGRAPHY INTO ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) REPORTING



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### Abstract

Sustainability accounting has expanded beyond financial metrics to include environmental, social, and governance (ESG) dimensions. However, conventional ESG reports typically dominated by numerical indicators and textual descriptions, often fail to capture the emotional, symbolic, and cultural aspects that shape stakeholder understanding and engagement. This study aimed to explore the role of photography as both a narrative and an evidentiary tool in ESG reporting. Using a qualitative visual ethnography approach, the research analysed original photographs taken in urban and community settings to represent dynamics related to ESG, such as human–nature relationships, informal governance, and collective social actions. The images were collected through field immersion and contextual observation. Findings suggested that photography can enrich ESG reporting by adding emotional depth and ethical meaning, thereby enhancing communication and stakeholder connection. This study advocates for photography as a valid and verifiable method to support more inclusive and engaging sustainability disclosures.

## INTRODUCTION

Sustainability accounting has evolved beyond traditional financial reporting frameworks toward a more holistic approach that encompasses environmental, social, and governance (ESG) dimensions. This shift reflects growing stakeholder demands for accountability regarding organisational ecological and social impacts (Bebbington & Larrinaga, 2014; Diwan & Sreeraman, 2024; Lodhia et al., 2025). Regional evidence supports this trend. Dillak & Hapsari (2024). Studies found that within ASEAN-5 banking companies, higher CEO power and gender diversity were significantly associated with improved ESG performance, highlighting the roles of leadership and board composition in institutionalising sustainability goals. In the Indonesian context, this shift is evident in the increasing emphasis on sustainability disclosure, not only among large corporations but also within small businesses where sustainability reporting is beginning to influence stakeholder perceptions and business performance (Gozali et al., 2024).

Despite the increasing prominence of ESG, its reporting practices remain heavily reliant on quantitative data and textual narratives. Such representational formats often fail to capture the affective, contextual, and experiential dimensions of sustainability practices (Ojala et al., 2021; Velte, 2023). While indicators such as carbon emissions, water usage, and waste volumes are important, they fall short in conveying the complex socio-ecological realities, particularly those concerning human–environment relationships (Horlings, 2015) as shown in Figure 1 below.

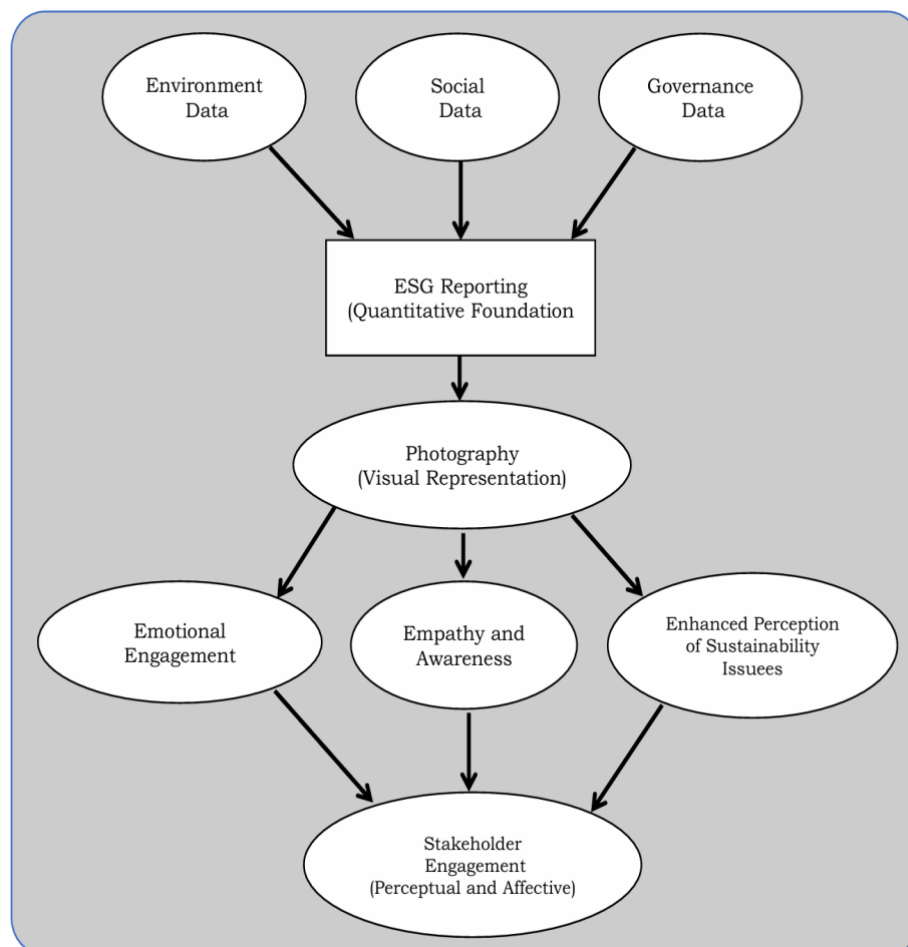


Figure 1. Conceptual framework developed by the author, illustrating the integration of ESG pillars, photographic representation, and stakeholder engagement

Recent literature has emphasised the need for alternative representational strategies that transcend numeric and textual formats. In this context, photography has emerged as a powerful visual medium capable of enriching ESG narratives with symbolic depth, emotional resonance, and cultural relevance (Davison, 2015; Hassan et al., 2024; Pirdaus et al., 2024). Research suggests that visual elements can enhance stakeholder engagement, deepen understanding, and strengthen the credibility of sustainability disclosures (Fenk, 2025; Tan et al., 2023).

However, the systematic integration of photography into ESG reporting remains underexplored in the accounting literature. Previous studies have largely focused on technical visualisations such as graphs, maps, and infographics, which function primarily as illustrative tools (Faccia et al., 2021; Petcu et al., 2024). The use of photography as a narrative and evidentiary medium, emphasising context, empathy, and participatory engagement, has yet to be adequately theorised within the field of sustainability accounting (Brown, 2015; Davison, 2015).

This study addresses that gap by developing a visual conceptual framework that connects three key components in sustainability reporting: ESG pillars, photographic representation, and stakeholder engagement. The framework is grounded in stakeholder theory (Freeman et al., 2010; Hörisch et al., 2020; Manetti & Bellucci, 2016; Valentinov, 2023), interpretive accounting theory (Gray et al., 2020; Unerman et al., 2014), and visual communication in accounting (Chong et al., 2023; Davison, 2015; Preston et al., 1996).

Figure 1 presents the visual conceptual framework developed by the author, grounded in stakeholder theory, interpretive sustainability accounting, and visual communication literature. It illustrates the interconnected dynamics between ESG pillars, photographic representation, and stakeholder engagement, which collectively underpin the study's approach to enriching sustainability disclosures.

Unlike purely technical visual approaches, this study adopts visual ethnography as its methodological foundation to explore how photography can document and communicate sustainability practices contextually. Through curated, field-based imagery of urban and community sustainability initiatives, photography is used not merely as an aesthetic illustration but as a narrative and evidentiary tool within ESG reporting (Gilmore et al., 2017).

Empirical examples of visual integration in corporate sustainability reports reinforce this proposition. Unilever, for instance, incorporates high-resolution imagery in its Climate Transition Action Plan to depict agroecological practices and human–environment interactions (Unilever, 2023a, 2023b). Danone uses photojournalistic narratives to visualise regenerative agriculture and biodiversity protection in its 2023 Integrated Report (Danone, 2023). Patagonia adopts an activist-oriented approach, utilising documentary photography to communicate its environmental ethics and advocacy (Patagonia, 2023). These practices demonstrate the communicative and strategic potential of photography in enhancing the expressiveness and impact of ESG disclosures (Chong et al., 2023; Tan et al., 2023).

Nonetheless, mainstream ESG accounting literature still largely emphasises regulation, verification, and standardisation, but often neglects the symbolic, emotional, and cultural dimensions of sustainability communication. Recent scholarship underscores that visual imagery, particularly photographs and visual persuasion techniques, can serve as powerful tools for embedding trust, ethical resonance, and stakeholder engagement into sustainability disclosures. (Carnegie et al., 2024; Chong et al., 2023; Khomsiyah et al., 2024; Oliveira et al., 2024). In contrast, visual communication literature emphasises the expressive and ethical power of images but often lacks engagement with institutional reporting frameworks. This disciplinary fragmentation calls for an interdisciplinary approach that positions photography not merely as an aesthetic or cultural artefact, but as a legitimate, contextualised, and participatory medium in ESG reporting.

This study addresses these gaps by posing the central research question: How can photography function as a visual medium that strengthens narrative, expands evidence, and enhances stakeholder engagement in ESG-based sustainability reporting? This research aligns with recent developments in global sustainability reporting standards. GRI, IFRS S1/S2, and SASB increasingly encourage the use of contextual information and diversified disclosure formats, including visual elements. For instance, GRI 101 and 102.46 promote the inclusion of qualitative and visual disclosures to improve stakeholder

comprehension. Similarly, IFRS S2 emphasises information connectivity and the narrative articulation of climate risks. Photography, in this context, can enhance local relevance, narrative depth, and reporting credibility.

Theoretically, this study reinforces the emerging view that accounting is not merely a technical procedure, but a communicative practice that conveys meaning and social value (Darnall et al., 2022; Gilmore et al., 2017; Unerman et al., 2014). Photography, under this paradigm, is more than visual embellishment; it functions as a representational tool that fosters transparency, ethical framing, and stakeholder inclusiveness.

Accordingly, this research adopts a qualitative approach grounded in visual ethnography and content analysis, in line with recent calls for more interpretive, participatory, and socially embedded accounting methodologies (Creswell & Poth, 2016; Miles et al., 2014). Its main contribution lies in articulating the role of photography as a communicative and evidentiary element in ESG reporting, opening pathways for more human-centred, contextual, and ethically resonant forms of sustainability accounting.

## METHOD

This study adopts a visual ethnographic approach as its central methodological foundation, enabling the documentation and interpretation of lived sustainability experiences through photography. Emphasising the writer's dual role as both participant and observer, this method facilitates engagement with the cultural, social, and environmental contexts embedded in ESG (Environmental, Social, and Governance) practices (Banks, 2018; Pink, 2020). In the context of sustainability research, visual ethnography illuminates the complex relationships between human behaviour, ecological systems, and governance dimensions often overlooked in traditional accounting paradigms (Heinrichs, 2019; Laberge, 2016).

Building on this foundation, recent scholarship further supports the relevance of this approach in unpacking the lived realities of sustainability, particularly in urban settings where environmental stewardship, community dynamics, and informal governance intersect (O. M. Lehner & Kyriacou, 2023; Maiello et al., 2013; Natali, 2019). By visually capturing these intersections, visual ethnography reveals the symbolic, emotional, and cultural dimensions of sustainability often absent from quantitative or text-dominated ESG disclosures (Hrasky, 2012; Sisaye, 2011). Photography, in this context, functions not merely as representation, but as a critical inquiry into how sustainability is lived, performed, and communicated.

Fieldwork was conducted across urban, peri-urban, and natural edge environments selected for their capacity to embody sustainability values in everyday life. In these settings, photographs documented daily practices that visibly reflected such values. These included ecological elements such as solitary wasps on native wildflowers and butterflies feeding in peri-urban areas, as well as social scenes including children studying outdoors, families fishing by riversides, children playing near water, and sanitation workers maintaining recycling stations. These visual moments function not merely as aesthetic artefacts, but as narrative-rich expressions of biodiversity (E), social inclusion (S), and grassroots governance (G), thereby complementing and expanding the communicative potential of ESG reporting (Davison, 2008; Milne et al., 2009).

Visual data collection spanned one full year and involved the production of original photographic material by the writer, using a digital mirrorless camera equipped with macro, wide-angle, and telephoto lenses, each selected to suit the visual requirements of specific observational contexts. Macro lenses captured ecological textures; wide-angle lenses illustrated spatial and communal dynamics; and telephoto lenses allowed documentation from a distance, minimising intrusion. This process was grounded in immersive ethnographic practice and informed by ethical awareness: all photographs were taken in public or communal spaces, with verbal consent obtained for identifiable subjects.

From hundreds of photographs, a curated set was selected based on thematic relevance to ESG concerns, symbolic depth, and communicative clarity. These images formed the core visual dataset for structured content analysis, which explored three analytical dimensions: visual composition, symbolic

interpretation, and alignment with ESG pillars. This enabled the extraction of embedded sustainability narratives, positioning photography not only as an expressive medium but also as an analytical and communicative tool in sustainability accounting.

Each image was first examined in terms of its compositional elements, including framing, lighting, spatial arrangement, focal subjects, and contextual background. These features were assessed to understand how visual cues guide the viewer's attention, evoke emotion, and shape interpretations of themes related to sustainability. For instance, the use of wide-angle perspectives captured the relationship between people and green space, while close-up shots emphasised cultural details such as traditional garments or tools used during community harvests.

The second level of analysis focused on interpreting the symbolic significance of the photographed scenes. Activities such as children reading outdoors and families fishing were examined as visual metaphors for learning, subsistence, community resilience, and ecological intimacy. These images conveyed values not easily captured through metrics, such as belonging, continuity, stewardship, and cultural identity. In doing so, they revealed the affective and narrative dimensions of sustainability.

Finally, each image was coded for its relevance to one or more of the three ESG dimensions. The Environmental (E) dimension included images depicting biodiversity, interaction with natural resources, such as clean riverbanks or visible engagement between humans and nature.

The Social (S) dimension encompassed scenes of intergenerational learning, shared activities, and local traditions that reflect social capital and the welfare of the community.

The Governance (G) dimension included informal community stewardship practices, participatory learning environments, and local leadership in public space maintenance. These three levels of analysis allowed the photographs to be interpreted not merely as artistic representations, but as legitimate narrative and evidentiary components that can enhance ESG reporting. By surfacing lived experiences and underrepresented perspectives, the visual data provided a fuller and more human-centred account of sustainability practices in everyday contexts.

This methodological approach integrates visual ethnography with content-based photographic analysis and is designed to explore sustainability practices as they are lived, represented, and communicated in everyday contexts. Drawing from established traditions in qualitative research, this design acknowledges the power of visual methods in accessing situated knowledge and embodied experiences that are often marginalised in mainstream sustainability reports (Banks, 2018; Pink, 2020). By combining observational photography with interpretive content analysis, the study moves beyond conventional data formats to access affective, symbolic, and contextual meanings. These elements are often underrepresented in typical ESG reporting formats, which prioritise quantitative disclosures (Hrasky, 2012; Milne et al., 2009).

The use of photography not only provides a visual narrative that complements textual and numerical ESG disclosures but also offers a distinct epistemological perspective for understanding the relationships among environmental conditions, social dynamics, and informal governance practices. When curated and placed within context, visual imagery becomes more than mere illustration; it serves as narrative documentation and empirical evidence related to sustainability values and behaviours (Araujo et al., 2020; Davison, 2008). Through carefully selected and ethically captured images—including scenes of communal reading in natural settings, subsistence activities such as fishing, and traditional attire within ecological contexts—this study offers visual documentation that is both narratively rich and analytically aligned with the multidimensional character of ESG frameworks. (Boirca, 2013; Chong, et al, 2023).

This methodology supports a pluralistic and stakeholder-responsive model of sustainability accounting, one that recognises lived experience and visual storytelling as legitimate and necessary forms of evidence (Gilmore et al., 2017; Momin et al., 2023). It reflects a broader epistemological shift in accounting scholarship, one that embraces interpretive, communicative, and participatory approaches to disclosure (Uncerman, et al, 2014). By centring narrative and emotional resonance within ESG communication, this approach not only expands the expressive capacity of sustainability reporting but also enhances stakeholder engagement and understanding. In doing so, it lays the conceptual and



methodological foundation for analyzing how photography beyond its aesthetic function can act as a strategic tool in deepening the communicative ethics of ESG performance.

## RESULTS

Building upon the methodological foundation outlined above, the following section presents the empirical findings generated through the visual ethnographic process. The curated photographs are analysed not merely as aesthetic representations, but as narrative and evidentiary components that articulate lived expressions of sustainability. Each image is interpreted based on its relevance to the core pillars of Environmental, Social, and Governance (ESG), in alignment with established sustainability reporting frameworks such as the Global Reporting Initiative (GRI), SASB, and IFRS S1/S2.

This results section is structured thematically to reflect how different photographic narratives illuminate specific ESG dimensions. The categorisation adopts a visual-to-ESG mapping framework, in which each image is analysed based on three key dimensions: (1) visual composition, (2) symbolic meaning, and (3) ESG alignment. This structure allows for a more nuanced reading of sustainability practices as they unfold across diverse everyday contexts and supports a more inclusive and emotionally resonant form of reporting.

This study affirms that visual reporting functions in a complementary way, not as a replacement for metrics, but as an expansion of what is considered reportable evidence. Quantitative indicators remain indispensable for tracking performance (e.g., carbon emissions, waste volumes, biodiversity loss), yet they often fail to capture the experiential, relational, and affective dimensions of sustainability. Photography adds narrative richness, cultural specificity, and human context, enabling stakeholders to interpret data more meaningfully. As such, visual elements augment the communicative power of sustainability reports by bridging data with emotion and metrics with meaning, without displacing the rigour of quantitative disclosures.

One of the most visually compelling images in this study captures a solitary wasp feeding on a native wildflower, photographed using a macro lens in the front garden of a house. The clarity of the insect's anatomy and the intricate texture of the flower head emphasise ecological interdependence at a micro level. This image represents biodiversity in action, illustrating the essential role of pollinators in sustaining floral reproduction, which in turn supports broader ecosystem services.



Figure 2. A wasp pollinating a wildflower

Figure 2 shows such interactions are often omitted from mainstream ESG disclosures, yet they are critical to GRI 304's focus on species presence, habitat health, and ecosystem restoration. The photograph symbolises environmental integrity, biological complexity, and the often-unseen layers of sustainability that exist outside industrial or organisational boundaries. Including visuals like this in ESG reports can enrich biodiversity disclosures, increase stakeholder awareness, and reinforce claims about ecological responsibility.



Figure 3. Butterfly on a flower

Figure 3 shows this image captures a bright yellow butterfly gently feeding on a yellow and white blossom in a suburban setting. Taken with a telephoto lens, the composition draws attention to the delicate relationship between pollinators and plants, a vital ecological process often overlooked in conventional sustainability reporting.

From an ESG perspective, this photograph aligns with GRI 304: Biodiversity, particularly with the standard's emphasis on species presence, ecosystem interdependence, and the organisation's proximity to biodiversity-rich areas. The image captures a local butterfly species interacting with native flowering plants in an urban community garden, visually documenting species that contribute to pollination and ecological regeneration.

Such interactions support Indicator 304-1 (Operational sites in or near protected areas and areas of high biodiversity value) by demonstrating the presence and activity of pollinators in green areas managed by local communities. Additionally, the photograph illustrates how community participation in planting native species helps preserve urban biodiversity, reflecting the core principles outlined in GRI 304.

Integrating such imagery into ESG communication can reinforce an organisation's commitment to ecological stewardship while enhancing stakeholder perception of environmental accountability. The photograph not only captures a biological process but also evokes affective engagement, drawing attention to the subtle yet critical roles of nonhuman actors in sustaining planetary health.



Figure 4. A tree frog in still water

This photograph captures a vibrant tree frog (Figure 4) partially submerged in a still body of water. Its poised presence and colourful skin serve not only as a visual focal point but also as a biological

indicator of environmental health. Amphibians are widely recognised as bioindicators due to their sensitivity to changes in water quality, temperature, and habitat disruption, making them critical subjects for environmental monitoring.

From an ESG perspective, this image contributes directly to the GRI 304 (Biodiversity) and 303 (Water) frameworks by visually documenting the presence of amphibian life in peri-urban aquatic systems. The photograph provides tangible evidence of micro-ecosystem stability, reinforcing the material relevance of small-scale biodiversity within broader sustainability narratives. Its emotional resonance emerges through the direct gaze of the frog and the delicate stillness of its habitat, inviting viewers to reflect on ecosystem fragility and the anthropogenic pressures that threaten such environments. Visually, the reflection motif in the water duplicates the image and symbolically suggests a mirroring between natural systems and human responsibility. This becomes a powerful conceptual cue in the context of ESG storytelling.



Figure 5. Father and daughter fishing together at sunset

Figure 5 shows this subsection explores how photographic representations can convey the social dimensions of sustainability, aligned with GRI 413 (Local Communities), GRI 403 (Occupational Health and Safety), and GRI 401 (Employment), as well as stakeholder-oriented expectations within ESG frameworks. The visual narrative examined here captures relational dynamics, intergenerational knowledge sharing, and the socio-cultural fabric of sustainability at the community level.

This image depicts a touching scene of a father teaching his daughter how to fish at the edge of a calm body of water, both wearing traditional Indonesian attire, batik and lurikan. The activity takes place at dusk, reinforcing a tone of reflection, intergenerational bonding, and cultural continuity. The father's mentoring gesture and the daughter's attentive engagement embody not only a familial relationship but also a form of informal knowledge transmission.

In ESG reporting, this photo directly aligns with GRI 413-1 and GRI 403 by illustrating how traditional and subsistence-based practices continue to serve as spaces for learning, family support, and local livelihood. It highlights the importance of community well-being, inclusive engagement, and participation across generations, central themes in stakeholder-responsive approaches to sustainability accounting.

Visually, the use of low light during sunset creates a contemplative atmosphere that reinforces the emotional impact of the narrative. The presence of water in the background serves as a symbolic element connecting nature, culture, and kinship, emphasising sustainability not merely as a collection of indicators, but as a lived social experience. The image encourages stakeholders to reflect on the social dimension of sustainability, where well-being is rooted in family cohesion, traditional knowledge, and access to local environmental resources.





Figure 6. Children reading together, surrounded by harvest and nature

Figure 6 show this photograph captures four children seated together in an open natural environment, deeply engaged in reading. Their traditional clothing, modest posture, and focused expressions reflect values such as cultural continuity, informal education, and social cohesion. Beside them stands a handcart filled with locally harvested produce, including melons, pineapples, and bananas, symbolising rural livelihoods and agrarian abundance. The natural backdrop of shaded trees, untended grass, and soft, diffused lighting completes the pastoral setting.

This image aligns strongly with GRI 413 (Local Communities) and GRI 404 (Training and Education), illustrating themes of intergenerational learning, community resilience, and access to education in informal settings. It also corresponds with SDG 4 (Quality Education) and SDG 11 (Sustainable Cities and Communities).

In visual terms, the warm colour palette and the juxtaposition of reading materials with fresh produce evoke a symbolic fusion between intellectual nourishment and ecological abundance. The photograph conveys a humanistic view of sustainability, one that is not confined to infrastructure or data, but is embodied in everyday acts of care, learning, and stewardship, as practised by youth in rural contexts.

The imagery evokes a deeply affective response, inviting viewers to consider the non-monetary value of cultural rituals and community-driven education in building a sustainable future. Rather than a didactic or staged moment, the scene appears intimate and spontaneous, reinforcing the power of photography to translate lived social realities into ESG-relevant visual narratives.



Figure 7. Children playing in a natural water stream

Figure 7 shows this image shows two young girls immersed in joyful play near a clear, shallow stream surrounded by dense green foliage. One child sits on a rope swing, holding a pink teddy bear, while the other is waist-deep in the water, reaching out with a smile. The scene conveys a vivid sense of environmental immersion, unstructured play, and social bonding in a natural setting.

This photograph aligns with GRI 413 (Local Communities) and GRI 203 (Indirect Economic Impacts) by highlighting the social value of accessible natural environments. It also resonates with SDG 3 (Good Health and Well-Being) and SDG 11 (Sustainable Cities and Communities) through its depiction of mental wellness, child development, and ecological equity.

The green foliage frames the composition, emphasising the children's immersion in a protected natural space. The interaction between the children and their environment serves as a powerful visual cue for the emotional and developmental significance of green spaces in peri-urban areas, where formal parks may be absent but natural riverscapes function as vital communal assets.

Symbolically, the photograph speaks to the idea of informal ecological citizenship, where play becomes a medium for connecting with nature, forming social bonds, and building affective ties to place. This type of imagery expands the conceptual boundaries of social sustainability within ESG frameworks by illustrating how communal and emotional well-being are tied to access to nature, especially for children.



Figure 8. Silent participation: Environmental responsibility in the hands of the elderly

Figure 8 shows this image documents a powerful moment of civic engagement: an elderly woman independently discards waste into a municipally designated garbage trolley in a public city park. Captured candidly in natural light, the image reflects the community's direct interaction with the governance infrastructure provided by the city of Palu. The labelled trolley, bearing hashtags such as #JagaPalu and #PaluMenujuAdipura, serves both as a practical waste receptacle and as a public campaign tool aligned with national cleanliness and environmental management goals.

Such grassroots-level participation highlights the operationalisation of environmental governance, where infrastructure becomes effective only when it is actively used and accepted by residents. The involvement of elderly citizens in maintaining urban cleanliness reflects a culturally rooted sense of responsibility, trust in formal governance mechanisms, and a dynamic feedback loop between citizens and municipal systems.

From an ESG perspective, this scene demonstrates how inclusive governance that enables participation from all demographics can enhance the legitimacy and success of environmental initiatives. It also aligns with key governance indicators identified in GRI 102 and GRI 103, particularly those related to stakeholder engagement, transparency, and institutional effectiveness in delivering public services.



Figure 9. Everyday practices of urban sustainability governance

Figure 9 photo effectively illustrates the governance dimension of ESG by showcasing two sanitation workers maintaining public recycling bins. The scene reflects a formal, institutional effort to manage environmental sustainability in an urban space, highlighting how local governance is made visible through routine operational practices.

The presence of structured recycling infrastructure and uniformed personnel signifies an organized approach to waste management within the broader framework of environmental governance. Rather than presenting governance as an abstract policy, the image captures its practical implementation in everyday settings. It underscores the role of public institutions in maintaining the cleanliness and usability of communal spaces, thereby reinforcing the connection between environmental objectives and institutional accountability.

The integration of photographic representation into sustainability accounting offers a compelling and innovative approach to enhancing the communication of Environmental, Social, and Governance (ESG) issues. While conventional ESG reporting relies primarily on quantitative indicators and textual descriptions to represent organizational performance, the findings of this study demonstrate that visual narratives can substantially enrich this communicative process. By depicting elements such as nature, biodiversity, and socio-ecological relationships, photographs serve not only to complement factual reporting but also to evoke emotional engagement and convey symbolic meanings that are often overlooked in traditional reporting formats.

Taken together, the visual findings underscore the multidimensional nature of sustainability as it is lived, practiced, and experienced across a variety of everyday contexts. The photographs act as interpretive lenses that make ESG performance more relatable, not only through metrics and regulatory compliance, but also through emotional, cultural, and narrative dimensions. This convergence between visual storytelling and ESG indicators signals the importance of adopting a more expansive understanding of sustainability communication. The following discussion examines how these visual elements both complement and challenge conventional reporting paradigms, while also proposing theoretical and methodological strategies for more systematically integrating photography into sustainability accounting frameworks.

When embedded within a rigorous accounting logic, photography can evolve from a narrative embellishment into a credible, auditable, and stakeholder-relevant reporting practice. This convergence between visual storytelling and traditional ESG metrics creates space for a new paradigm in which sustainability is not only measured through data, but also experienced through lived realities, interpreted through contextual understanding, and emotionally understood by diverse stakeholders.



## DISCUSSION

Building upon this convergence, the findings of this study affirm that photography serves as a complementary rather than substitutive mechanism to quantitative indicators in sustainability accounting. While traditional ESG reporting frameworks rely heavily on metrics such as emissions, energy use, and water withdrawal, these numeric values have limited capacity to convey the lived realities and emotional stakes embedded in sustainability practices.

Rather than displacing quantitative data, photographic narratives function as interpretive scaffolds that make such data more relatable and culturally legible. For example, an image of children learning outdoors or workers sorting plastic waste may not quantify impact, but it can effectively anchor stakeholder attention to specific ESG themes, thereby enhancing trust, engagement, and transparency. In this way, visual media contribute to narrative coherence and stakeholder inclusiveness, core principles emphasized in evolving reporting standards such as GRI 101, IFRS S1/S2, and SASB sector-specific disclosures.

This integrative capacity, combining measurable outcomes with meaningful storytelling, marks a critical shift in sustainability communication. It expands the expressive tools available to organizations without compromising reporting rigor. This approach aligns with critical perspectives in accounting that frame sustainability not merely as a matter of compliance, but as a communicative practice grounded in ethics, empathy, and accountability (Gilmore et al., 2017; Unerman et al., 2014).

One of the most salient contributions of this study is its demonstration that photographic representation, particularly in the form of contextually grounded ecological and social imagery, enhances the communicative depth of sustainability accounting. Traditional ESG reports predominantly rely on numeric indicators, charts, and tabular formats, which are effective for performance tracking but often fail to engage stakeholders on a personal or emotional level. This technical approach has been critiqued for decontextualising complex social and ecological realities and for marginalizing local, lived experiences (Chopra et al., 2024; Kopnina et al., 2024). In contrast, the visual narratives presented in this study, including images of pollinators in peri-urban habitats and children reading amidst natural greenery bring affective and relational dimensions to the forefront.

Empirical research supports the notion that emotional engagement is a key factor in shaping pro-environmental attitudes and behaviors (Boomsma et al., 2016; Li et al., 2022). Visual elements in sustainability communication, particularly photography, can generate empathy, capture attention, and convey urgency more effectively than textual descriptions alone (Brosch & Steg, 2021; Kuzinas, 2019). A photograph of a frog resting on water, for example, is not only an ecological observation; it is also a symbolic reflection of vulnerability, inviting the viewer to contemplate the fragility of freshwater ecosystems. Such images function as entry points to deeper understanding, where biodiversity and sustainability are not just statistics but shared human concerns.

The visual evidence also aligns with the framework of affective ecology (Duffy et al., 2019; Yang et al., 2018), which posits that emotional affinity with the natural world fosters more responsible environmental behaviours. In this light, photography operates not merely as a communicative tool but as an affective bridge between scientific knowledge and stakeholder perception. Photographs of everyday environmental interactions, such as urban gardening, traditional harvests, or pollinator presence, provide not only narrative coherence but also a symbolic vocabulary for sustainability that resonates across diverse audiences.

Building on this communicative potential, the curatorial reflection of each image plays a pivotal role in deepening the thematic impact of visual ESG disclosures. The photographs not only showcase the beauty of nature but also serve as compelling narratives about the interconnectedness of all life forms and the urgent need to protect these systems (Madzari, 2024). For example, the butterfly resting on a flower is not merely a beautiful image; it symbolises the vital role of pollinators in food security and the broader agricultural economy. The frog in water underscores the fragility of aquatic ecosystems and the imperative for water conservation practices. These curatorial narratives help contextualise the photographs within the broader discourse on sustainability and environmental stewardship (Huntjens, 2021; Leimona et al., 2019).

These findings are reinforced by the photographic evidence collected and analyzed in this study, which offers a layered interpretation of environmental and social dynamics as lived, observed, and documented through the lens of sustainability. Each photograph analysed has the potential to enhance ESG reporting by visually conveying key environmental issues that are often difficult to articulate through textual or numerical data alone (Darnall et al., 2022; Kanbaty et al., 2024; Yip & Yu, 2023). Photographs and other visual elements help construct a clearer and more comprehensive picture of sustainability efforts, offering stakeholders an intuitive understanding of environmental impact (Momin, et al, 2023; Sun, 2024).

Alongside environmental and social themes, several photographs foreground governance not through formalized abstractions, but through tangible, embodied practices of care and responsibility observed in everyday contexts. For instance, one image captures two female sanitation workers actively maintaining a public recycling bin in a city park. Through their daily tasks, the workers enact policy on the ground, demonstrating how environmental governance is upheld by often-overlooked labour that bridges institutional intent and practical execution. The image exemplifies subtle forms of governance in ESG reporting, grassroots compliance, infrastructure maintenance, and embodied environmental care. These micro-governance acts underscore the vital human dimension of sustainable city management and highlight the importance of recognizing labor as an ESG asset (M. Lehner & Halliday, 2014; Spence & Rinaldi, 2014). The visual representation of such everyday governance practices not only humanizes policy implementation but also reinforces the accountability narrative within ESG frameworks by making governance visible, relatable, and contextually grounded (Davison, 2015). Moreover, this form of visual disclosure aligns with reporting principles outlined in GRI 102 and GRI 103, particularly stakeholder inclusiveness, performance transparency, and ethical labor practices (GRI, 2021). These findings also align with empirical research showing that governance-related factors such as CEO power and gender diversity positively influence ESG performance in corporate contexts (Dillak & Hapsari, 2024).

This approach aligns with recent developments in accounting research that advocate for reimagining sustainability reporting as a socially embedded, interpretive process, one that incorporates narrative structures, visual aesthetics, and symbolic representations (Chong et al., 2023; Unerman et al., 2014). Visual storytelling, in this context, expands the expressive capacity of ESG disclosures by introducing alternative yet complementary epistemologies. As scholars in visual studies have noted, photography enables the public to see sustainability in ways that textual descriptions and quantitative metrics alone cannot convey (Cho et al., 2018; Hossain et al., 2022).

Crucially, the use of photographic content must be methodologically accountable. As the visual data in this study were produced by the writer, a visual ethnographic and reflexive framework was employed to ensure both validity and epistemological rigour. The photographs are not mere aesthetic additions; rather, they are anchored in specific, observable sustainability practices. By systematically aligning each image with relevant ESG indicators—such as GRI 304 (Biodiversity) and GRI 413 (Local Communities) this study minimises the risk of visual greenwashing and positions photography as both a narrative and evidentiary device within sustainability disclosure (Ahsun et al., 2024; Ulvtorp, 2024).

Future ESG reporting that incorporates photographic storytelling should embed verification strategies such as stakeholder co-interpretation, metadata documentation, and independent review to uphold accountability, reliability, and verifiability. These measures help ensure that visual content complements rather than substitutes for empirical data.

This visual approach also addresses a persistent communication challenge in ESG reporting: effectively engaging diverse stakeholder groups. Traditional sustainability reports often remain inaccessible to non-expert audiences due to their reliance on technical language and data-centric formats. Photographic narratives help to bridge this gap by humanising sustainability issues and conveying them through tangible, emotionally resonant imagery (Aschemann et al., 2016; Wanvik, 2016; Ye et al., 2023). For instance, a photograph of a child reading in a green space or a family fishing along a clean riverbank can communicate values of education, intergenerational care, and environmental stewardship in ways that transcend the limitations of technical jargon.



Finally, this study contributes to a growing body of literature that advocates for the integration of art-based methods in environmental and sustainability communication (Davison, 2002; Garnett et al., 2017). Photography enables organisations to move beyond the limitations of purely data-driven reporting, allowing sustainability to be represented as both a material reality and a cultural experience. In doing so, visual disclosures foster a more holistic understanding of corporate responsibility, one that values human experience, aesthetic expression, and ethical imagination alongside conventional performance metrics.

The results presented in this study challenge the conventional boundaries of sustainability accounting by positioning photography as a complementary evidentiary and communicative tool within ESG reporting. Traditionally, sustainability disclosures have prioritized objectivity, standardization, and comparability principles that underpin dominant frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and IFRS S1/S2 (IFRS Foundation, 2023). However, as the findings suggest, these frameworks often fall short in capturing the relational, emotional, and experiential dimensions of sustainability, particularly within community-based or informal contexts (Bebbington & Larrinaga, 2014; Darnall et al., 2022; Kopnina et al., 2024).

Photographic narratives, when interpreted through a structured visual-to-ESG mapping framework, are not intended to replace quantitative indicators but to enrich them with meaning-laden representations that bridge the gap between metrics and lived experience (Cho et al., 2018; Chong et al., 2023). This approach is particularly salient for stakeholder groups that prioritise contextual understanding, inclusivity, and narrative coherence in sustainability discourse (Abos et al., 2024; Garnett et al., 2017). Visuals can render abstract ESG themes, such as biodiversity preservation or social cohesion, more tangible, culturally resonant, and ethically persuasive. In this capacity, photography acts as a connective medium between the empirical rigor of accounting and the interpretive richness of human-centered storytelling (Gilmore et al., 2017; Merkl-Davies & Brennan, 2017).

At the same time, the integration of writer-generated visual content necessitates critical methodological reflection. Concerns about subjectivity, visual bias, and the potential for aesthetic manipulation are legitimate, particularly amid growing scrutiny of visual greenwashing in corporate disclosures (Davison, 2015; Hossain et al., 2022; Ulvorp, 2024). To mitigate these risks, this study emphasises analytical transparency and introduces a multi-pronged verification strategy. This includes ESG-aligned image selection (e.g., GRI 304 for biodiversity, GRI 413 for community engagement), adherence to ethical documentation protocols, the inclusion of contextual metadata, and the implementation of triangulation frameworks for visual analysis (Ahsun et al., 2024; Krippendorff, 2018). When situated within a rigorous accounting logic, photography can transcend its role as narrative embellishment to become a credible, auditable, and stakeholder-relevant form of disclosure.

## CONCLUSION

This study advances photography as a critical and interpretive lens within sustainability accounting, positioning it not merely as a medium of illustration but as a legitimate evidentiary and communicative tool. By employing writer-generated, original photographs—rather than relying on visuals extracted from existing corporate ESG reports—this research demonstrates how everyday sustainability practices, often marginalised in conventional disclosures, can be visualised and meaningfully interpreted through ethnographic imagery.

While inherently situated and subjectively framed, the photographs provide valuable insights into the symbolic, affective, and ethical dimensions of ESG concerns, such as biodiversity, community participation, and informal governance dimensions that often elude metric-driven reporting frameworks. Rather than seeking to replace traditional ESG indicators, this study advocates for a complementary visual layer that enriches narrative depth, cultural resonance, and stakeholder empathy in sustainability communication.

Theoretically, this research contributes to interpretive and critical traditions in sustainability accounting that challenge the dominance of positivist disclosure models (Gilmore et al., 2017; Unerman et al., 2014). By situating photography within an analytically grounded framework, the study

demonstrates that visual narratives can be systematically aligned with formal ESG standards, including those issued by GRI, SASB, and IFRS S1/S2. In doing so, it positions accounting not only as a technical system of measurement but also as a socially embedded and ethically informed communicative practice.

Practically, this approach offers corporations, sustainability practitioners, and standard setters an expanded repertoire of communicative strategies. Photography can be strategically integrated into ESG reporting in several meaningful ways. First, as evidentiary documentation, photographs can substantiate specific ESG topics by visually capturing real-world practices related to biodiversity, waste management, and other relevant indicators. Second, photography can enrich narrative depth by contextualizing quantitative data through situated, lived visual representations. Third, curated visual supplements such as annotated photo essays or image galleries embedded with ESG-relevant metadata can accompany conventional disclosures, providing stronger interpretive and emotional dimensions.

When applied with methodological rigour and ethical care, these strategies can enhance transparency, deepen stakeholder engagement, and increase the authenticity of sustainability narratives, while minimising the risk of superficial or performative representation.

Nevertheless, this study acknowledges several limitations. The visual data were collected within a geographically and ecologically narrow context, focusing primarily on urban and peri-urban environments. The interpretations were shaped by the writer's cultural background and situated perspective, which, while reflexively addressed, may have influenced the framing and analysis. Moreover, the absence of triangulation with stakeholder or organisational viewpoints limits the breadth and diversity of the findings. The writer's dual role as both image-maker and analyst also introduces subjectivity, underscoring the need for more collaborative and participatory visual methodologies in future research.

Future research should extend this inquiry across diverse industrial sectors, ecological settings, and regulatory environments, with particular emphasis on developing standardised protocols for visual ESG disclosures. These protocols should address critical issues such as verifiability, contextual integrity, and resistance to aesthetic or narrative manipulation. Furthermore, investigating how different stakeholder groups interpret and emotionally engage with ESG-related imagery would provide valuable insights into the communicative efficacy, limitations, and ethical considerations of photography as a tool in sustainability reporting.

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