



Green Adaptation in Tourism Communication: A Comparative Visual Analysis of Jeju Island and Bali

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Abstract. The most usual challenge in technology-based sustainability is getting people to adapt to green communication. Social media is filled with messages encouraging people to be environmentally friendly, but few, especially writers, have studied or researched visuals that connect them to real-life applications. This paper investigates how social media influencers on Jeju Island in South Korea and Bali, Indonesia, incorporate sustainable communication into green communication through their Instagram visual content. The community's adaptation is also important. This study uses eight purposively selected visuals from each Instagram account. @visitjeju.en (representing official regional governance) and @kopernik.info (representing socio-environmental NGOs), with a time span between 2020 and 2025. The framework used is a qualitative comparative study based on Kress and van Leeuwen's visual social semiotics. This study shows two different green communication paradigms. Jeju reflects institutional and macro-structured measures that encourage community compliance with certified environmental zoning and adequate infrastructure. Meanwhile, Bali shows the use of a community-based applied model through visual humanization. Based on these data, this paper formulates the Green Communication Skills Triad, consisting of eco-literacy translation framing, grassroots technical storytelling, and anti-greenwashing visual auditing. This formulation is expected to have an impact on policymakers and other audiences attempting to develop further ideas..

Keywords: green adaptation, visual social semiotics, applied science, green communication skills, Jeju Island, Bali.

1 Introduction

Technological developments go hand in hand with the advancement of science and technology. Organizations and governments not only implement their environmental programs, but they also need to explain the goals and values of those programs to audiences and the public. In this digital era, communication has moved rapidly to reach the public.

Environmental communication has a dual function that shapes our understanding of the environment through both pragmatic and constitutive messages [1] and affects the society's understanding of what is happening in the environment and their responses to it [2].

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Institutions and non-governmental organizations are steadily using social media to build communication and a platform for connecting ecological interests, governance, and applied science. This communication is not only for conveying messages but also for conveying our perceptions, values, and ways of supporting our relationship with nature.

Greenwashing is also an important part of green communication. It happens when a company advertises its product or service as environmentally friendly and sustainable, even though the actual environmental impact may contradict these claims. As Beder [3] states, the environmental narratives built by companies and regional institutions don't always reflect real change. In some instances, the green messages are merely a smokescreen to disguise old habits. And here comes the challenge between compliance and real sustainability. Thus visual rhetoric must be understood critically.

According to Kress and van Leeuwen [4] in their framework of visual social semiotics, the choice of color, spatial layout, composition, and even the way in which things are displayed are not simply aesthetic choices. Each of these elements can be a symbol of power relations, of governance models and of degrees of community participation.

The visual literacy skills developed by Kress and van Leeuwen relate to how stakeholders may master the development of authentic, transparent environmental messages that can encourage real action. According to the United Nations Environment Programme (UNEP), green skills encompass both technical knowledge and non-technical skills needed to support sustainable community life [5].

In the author's view, people's green skills now go beyond technical skills. The translation, visualization and explanation of environmental data are now an integral part of the digital era adaptation. In this paper we introduce the concept of ecoliteracy framing, referring to the capacity of the community to engage with complex data in an appropriate, contextual and ethical way, in a solution-oriented and engaging manner. The goal is to create paths for real participation.

This paper compares two cases from Jeju Island, South Korea and Bali, Indonesia, to examine the influence of regional conditions on the development of green skills. These locations are useful examples because of their different institutional systems and their ways of applied science.

Jeju's digital green communications, represented by the official English-language tourism account @visitjeju.en, align with South Korea's "Carbon-Free Island 2030" initiative. This model uses top-down and monocentric green governance as proposed by Hajer [6]. The sustainability of green communication is displayed with government-supported content, an emphasis on nature tourism, public transportation, and compliance carried out by tourism institutions.

Bali demonstrates a different perspective. Through the Instagram account @kopernik.info, a non-governmental organization working in the socio-environmental field, the green communication narrative The non-governmental organization @kopernik.info constructs the green communication narrative from a bottom-up perspective. from a bottom up perspective. Kopernik focuses more on applying appropriate technology and applied science at the community level to address ecological vulnerability in Bali [7].

In digital space, this approach is understood through community-based communication, local social transformation, ecological literacy and grass-roots innovations that can be more widely disseminated such as solar power technology, eco-friendly agricultural practices and community-based waste management.

This research focuses on the difference between the macro-technology approach in Jeju and the community-based applied science approach in Bali. The authors seek to map the green communication skills needed to bridge the gap between institutional-level environmental policies and the ongoing adaptation processes within communities.

2 Methodology

This research uses a qualitative comparative approach with visual social semiotics as the basis of analysis [4]. The research process took place in two main stages. First, the researcher collected data purposively from the Instagram accounts of Jeju and Bali. Second, all materials were studied through several layers of reading. Comparisons were made between accounts that brought institutional and policy perspectives and non-governmental organizations that focused on applied science.

2.1 Data Collection and Selection Criteria

The data used for this research were collected from eight visuals that were selected from Instagram posts ranging from January 2020 to December 2025. Two Instagram accounts were selected to represent different approaches in governance and applied science. @VisitJeju.EN is the official channel in English of the Jeju Tourism Organization in South Korea. @kopernik.info is an account linked to a socio-environmental NGO located in Bali, Indonesia.

Eight images were selected based on their relevance to the theme of green adaptation and technology-based sustainability. The selected images had to clearly demonstrate one of two forms of participation within the theme. The first form is macro-scale environmental governance, such as ecomobility, certified zoning, or administrative frameworks. The second form is community-based socio-environmental interventions, such as appropriate green technology, local waste handling systems, and community labor activities. This criterion was used to make sure that all the data actually reflect the scope of applied environmental communication that is the focus of the analysis.

Table 1 provides a complete list of the 8 purposively selected images with sources, publication dates and key environmental themes.

Table 1. 8 Chosen Instagram Visuals for Comparative Analysis.

Asset ID	Account	Upload Date	Main Visual Theme/Content
Pic 01	@visitjeju.en	July 25, 2025	Suwolbong Peak. UNESCO institutional geological zoning and regulated boardwalk.
Pic 02	@visitjeju.en	February 14, 2022	Eco-mobility infrastructure, smart grid promotion, or certified eco-trails (Seogwi Dawon, tea gardens).
Pic 03	@visitjeju.en	November 19, 2021	A pristine landscape depiction emphasizing macro-spatial institutional governance (Mount Hallasan).
Pic 04	@visitjeju.en	November 7, 2025	Structured public transportation/low carbon consumption guide (giant wind turbines in the silver grass cluster of Eoeum-ri).
Pic 05	@kopernik.info	May 22, 2025	Digitalization of waste solutions: behavior-based waste management in Gianyar.
Pic 06	@kopernik.info	January 14, 2022	Application of solar-powered water distillation technology in rural Bali.
Pic 07	@kopernik.info	July 20, 2021	Improving waste sorting behavior in Bali.
Pic 08	@kopernik.info	June 4, 2021	Coral reef regeneration in Candidasa, Bali.

2.2 Visual Semiotic Analysis Framework

The collected visual captures were then examined using Kress and van Leeuwen's Visual Social Semiotics framework [4]. The analysis was conducted through three communicative metafunctions that work simultaneously. These three metafunctions were then mapped into aspects of green communication skills development, as summarized in Table 2.

Table 2. Analytical scheme mapping visual semiotics to green communication skills.

Visual Meta-function	Analytical Focus	TargetGreen Skills
Representational	Objects and backgrounds depicted in the image	Framing Ecological Literacy (Institutional vs. Societal)
Interactive	The relationship established between the viewer and the image (e.g., viewing direction, camera angle, distance)	Ethical Engagement (Compliance vs. Empowerment)
Compositional	Element arrangement, color salience, and textual integration	Digital Curation (Clarity vs. Aesthetics)

For the first explanation, the representational meta-function, we can examine what is displayed in an image. In the @visitjeju.en account, attention is drawn to the extent to which the visuals highlight macrostructures that present environmental governance in accordance with institutional directives, for example, signage.

The second explanation is Interactive Metafunction, which is the author’s analysis of the relationship created between the image and the viewer. In Kopernik’s upload, the close-up shots and eye-level perspectives create a sense of intimacy. This option generates empathy and makes social change more accessible to everyday life. Jeju shows a different trend. The long-range landscape shots, high angles, and tidy compositions of infrastructure produce a sense of institutional authority and commitment to existing environmental systems.

The third explanation, the compositional metafunction, analyzes the composition of the visual elements, the typographic style, and the hierarchy of colors. This analysis is important for determining whether environmental text, logos, and technical elements are used as information that helps the audience take action or simply as aesthetic ornamentation to meet marketing needs.

These three layers are then combined to find the practical competencies needed to build authentic green communication.

3 Findings and Discussions

The eight Instagram posts show different ways of developing green communication. The account @visitjeju.en presents environmental messages in a more organized and highly controlled way, with a broad regional focus. In contrast, @kopernik.info uses a more community-based approach and gives greater attention to practical and

appropriate technology. Based on Kress and van Leeuwen’s framework, these visual choices do more than share information. They also show different views on environmental governance and the role of society in supporting environmental action.

3.1 Representational Metafunction: Narrative Vectors and Environmental Framing

In the @visitjeju.en timeline, what receives attention is mainly spatial organization on a larger scale instead of human activity. Narrative vectors that come about here are non-transactional and conceptual in nature. Pictures of natural scenery, such as Seongsan Ilchulbong, which is a UNESCO World Heritage site, and the landscaped Jeju Olle Trail, are usually taken with a wide-angle lens.



Fig. 1. Institutional order visualized on @visitjeju.en.

Human presence: Removing or reducing human presence from the visuals of Jeju de-centers the scene. or even taken out of the images of Jeju, thus de-centring the scene. This is a positioning of humans as the beneficiaries of a green ecosystem already designed and managed.

Signs such as official logos and bilingual statements about global heritage status strengthen the impression that the environment is under state management. Community adaptation is implicitly placed within a top-down framework. The public is encouraged to enjoy and comply with the management of the space provided.

@kopernik.info is more action-Oriented. The content is focused on the presence of humans, which is a result of the activities carried out by them. NGO workers, local farmers and community members are seen directly interacting with technology or performing environmental practices.

Visuals can show the process of mixing soil with biochar, assembling a low cost solar powered water distillation unit and even the process of sorting waste in rural Bali. Here, applied science is not an abstraction but is plainly to be seen in the work of human beings.



Fig. 2. Visualization on @kopernik.info

3.2 Interactive Metafunction: Constructing Power Interactions and Social Distance

Interactive metafunction helps us see how an image builds social relationships and reveals the influence relationship between Instagram followers (the audience) and the people represented. On @visitjeju.en, the pattern is quite consistent. This account frequently uses long-range and high-angle shots when showcasing green infrastructure and pedestrian paths. There is no eye contact between the models in the photos and the camera. The spectator is invited to contemplate a landscape that is conserved, managed, optimized. The state appears as the primary manager and guardian of ecology, while citizens are positioned as users or consumers of the ecological system that has been built.

The @kopernik.info account uses a very different visual approach. Close-ups and medium shots at eye level create a more equal relationship between the viewer and the

people shown. Camera is close to the action, which makes the scene feel more immediate and personal. The visual narrative moves to hands at work, expressions on faces, and interactions among community members.

@kopernik.info doesn't only provide information, it supports also empathy, solidarity and ethical engagement. In this approach, green skills emerge as something close to human life and directly related to shared environmental vulnerabilities.

3.3 Compositional Metafunction: Information Value, Salience, and Color Semiotics

The layout used by @visitjeju.en appears organized and centralized. Based on the layout theory of Kress and van Leeuwen, the left side, known as the "Given" space, often shows familiar natural scenery. Conversely, the right side, the "New" space, typically offers more details like visitor guidelines or trail maps.

Color also plays an important role. Highly saturated colors in natural landscape images are often used to reinforce environmental symbols. Blues are often linked to fresh air, whereas greens are used to represent unspoiled nature. Strong color contrasts create a neat, clean, and efficient impression. The use of sans-serif typography for text further enhances the brand's professional image. This aligns Jeju's visual communication with internationally accepted sustainable tourism standards.

Kopernik employs various compositions. For some carousel infographics, information is arranged in an "Ideal/Real" sequence. In "Ideal," there is the explanation of environmental problems or scientific theories, whereas in "Real," there is the discussion of numbers and actions that can be taken to implement the solution locally.

The natural and less processed texture of images gives them an attractive quality, rather than the use of vivid filters. The colors that appear look quite natural, close to field reality: brown, green, and bright sunlight colors. The rigid design receives no particular emphasis. Clean text boxes make it easier to read information provided in posts clearly. This particular composition places greater emphasis on the clarity of applied environmental science in relation to its commercial aspects.

3.4 Formulating the Green Skills Triad for Applied Communication

A comparison of institutional visual content in Jeju and community-based applied science in Bali reveals three key competencies essential to developing in applied communication education. These three can serve as the foundation for fostering community adaptation:

1. Organizing Ecological Literacy. Communication practitioners need the ability to simplify environmental regulations, macro-scale data, and zoning policies without losing their essential meaning. The challenge is visible in the Jeju model. Complex infor-

mation needs to be translated into a neatly structured and easily understood digital narrative. Such top-down policies tend to create distance rather than a sense of belonging, engagement and pride.

2. Technical Storytelling to the Public. This competency relates to the ability to document, humanize, and expand the narrative of low-cost, appropriate technologies, as demonstrated in the Kopernik approach. Communication practitioners need to capture the fieldwork process as it is, including the fine details of technology experiments and applications. Data from applied science is more readily understood when it is translated into relatable stories, and has the potential to create sympathy and drive behavior change.

3. Visual audit against greenwashing This skill requires design literacy. The person will have to analyze the visual aspects like colors, text hierarchy, layout, and connections between visuals and the evidence supporting them.

4 Conclusions and Implications

This research examines and assesses how social media shapes visual discussion of technology-based sustainability. This paper compares the Instagram accounts @visitjeju.en on Jeju Island and @kopernik.info in Bali, using Kress and van Leeuwen's Visual Social Semiotics.

From the evaluation of the chosen images, it is evident that green communication does not work in an individual, uniform way but varies according to situations. The case of Jeju Island reflects a model of green communication from above, through the use of certified places and eco-mobility. In the case of Bali, the bottom-up model is reflected through its Twitter account, @kopernik.info, with proper technology and empowerment.

The analysis results show that authentic green adaptation requires an approach that specifically demonstrates communication skills.

Therefore, the author proposes the Green Communication Skills Triangle as a theoretical and practical contribution. It encompasses ecological literacy management, technical public storytelling, and anti-greenwashing visual audits. This proposal is expected to help applied communication science transform the digital space from a mere promotional medium into a more active, transparent, and usable tool to enable sustainable environmental living.

With tourists and commercial interests increasingly demanding sustainability, environmental organizations and stakeholders must be aware of the growing risk of greenwash-

ing. One answer may be evidence-based communication. Local specific data and concrete documentation of community work provides a stronger basis for building trust. This visual honesty makes environmental accomplishments easier to verify, and less likely to get lost in shiny marketing trends.

There are still several limitations to this study. It only looks at eight Instagram posts, four from Jeju and four from Bali, posted between 2020 and 2025. Therefore, the findings may not be able to fully represent all the green communication practices in the two regions.

Ultimately, this research shows that green communication should be able to offer information that is authentic, verifiable, and intelligible enough to enable people to engage in sustainable change.

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