

Exploring the Social Media Practices of Environmental Non-Governmental Organizations (ENGO): A Qualitative Approach

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Abstract

This study aims to enhance the understanding of how Environmental Non-Governmental Organizations (ENGOs) use social media to engage their audiences in the causes they advocate. By incorporating elements from the Uses and Gratification theory and other sources, the researchers conducted one-on-one interviews with 20 ENGOs. Data were analysed through textual analysis using NVIVO software. The results indicate that ENGOs leverage social media, particularly Facebook, to raise awareness about climate change and biodiversity, with positive impacts on fundraising and lobbying, depending on resource availability. However, limited budgets and corporate governance issues pose challenges to social media use. This study provides managerial recommendations for developing more engaging and effective communication strategies on social media, as well as further exploration of environmental communication trends.

Keywords: *Engos, Social Media, Social Media Engagement Behavior, Environmental Communication, Uses and Gratification Theory.*

Introduction

In recent years, the degradation of Earth's natural systems has been substantially observed due to population growth, urbanization, industrialization, and consumption (Hasler *and al.*, 2020; Kurniawan and Rye, 2014). This has resulted in increased recognition of the necessity for environmental protection and an increase in environmental activism (Murphy-Gregory, 2018). The detrimental consequences of pollution, biodiversity loss, climate change, and other environmental issues often motivate individuals to engage in environmental activities and campaigns (Susanto and Thamrin, 2021).

Environmental Non-Governmental Organizations (ENGOs) are among the primary actors in environmental activism, with the primary objective of protecting and restoring the environment from the harm caused by human activities (Karpus, 2018). They also conduct research to aid policy development, monitor environmental issues (Partelow *and al.*, 2020), and provide technical assistance to local communities and governments (Doyle, 2009). From a communication standpoint, they raise public awareness and educate the public about environmental issues and solutions, and advocate and campaign for biodiversity and sustainability (McCormick, 2023).

ENGOs primarily utilize social media platforms to achieve their objectives. These platforms facilitate negotiations and coordination between the public and the adjustment of government policies (Hermida and Hernández-Santaolalla, 2018). Unlike websites and email communications, social media can stimulate extensive public participation (Susanto and Thamrin, 2021). Social media can function as a valuable tool in the management of natural disasters, as it enables various stakeholders, including ENGOs, public and private entities, and communities, to efficiently share information, collaborate, and generate user-generated content at a relatively low cost (Ray and Bala, 2020; Simon *and al.*, 2015).

Social media platforms have been regarded as valuable tools for promoting communication and engagement as they facilitate the dissemination of information, mobilization of support, and encouragement of community participation (Janssen Danyi and Chaudhri, 2020). However, there are numerous challenges

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associated with the use of these platforms for environmental and other purposes. Previous research has indicated that non-profit organizations are generally reluctant to embrace digital technologies due to a range of factors, such as restricted operational budgets, reliance on volunteer labor, apprehension about the efficacy of online interactions, and privacy concerns related to surveillance (Mol, 2009; Nulman and Özkula, 2016). Additionally, a generational divide has emerged, with older individuals preferring websites and email that were widely used during the 1990s, while younger individuals perceive social media platforms such as Facebook or Twitter as a less risky means of engaging in activism (Sandoval-Almazan and Gil-Garcia, 2014; Sankah *and al.*, 2017).

Moreover, a lack of understanding and research into the effects of social media on societies, particularly in emerging and Arab countries, has led to insufficient or limited use of these platforms by non-governmental organizations (NGOs) in these regions (Ashmawy, 2017; Lovejoy and Saxton, 2012). In Tunisia, a North African Arab country, studies on the relationship between NGOs and social media have primarily focused on the role of these media in the country's democratic transition and consolidation, following the popular uprising of 2011 (Karolak, 2020; Wulf et al., 2013). To the best of the authors' knowledge, no research has been conducted on the use and impact of social media on environmental causes and environmental non-governmental organization (ENGO) activism.

This research aims to deepen the understanding of the manner in which ENGOs use social media to foster environmental consciousness and engage the public in addressing these concerns. The investigation concentrates specifically on the variables that influence ENGOs' adoption of social media, as well as the information they disseminate and propagate through these channels.

The questions posed in this study were as follows:

What factors contribute to the use of social media by ENGOs in Tunisia?

How do ENGOs use social media to further environmental causes in Tunisia?

What forms of engagement are generated by the promotion of environmental issues on social media?

Environmental non-governmental organizations (ENGOs) face the pressing need to enhance their communication strategies to effectively address environmental challenges and engage the public in these issues. While social media presents a promising avenue for environmental activism, various obstacles must be overcome. These include historical resistance to technology, generational disparities in platform preferences and knowledge gaps, particularly in emerging and Arab countries. Therefore, it is important to investigate the factors that influence the use of social media by ENGOs and the impact of their messages on public engagement with environmental issues. This study focuses on the Tunisian context, which has received insufficient attention in this field of research.

This study comprises three main components. The first component involved a thorough examination of the extant literature on the relationship between ENGOs and technology, with a specific focus on social media. Additionally, the factors that influence the adoption and use of social media by ENGOs are analyzed, as well as the types of content on social media and their impact on public engagement. The second component relates to methodology, which includes a description of the data collected from a qualitative study involving various ENGO members. Finally, the third component presents conclusions and managerial implications based on the findings and discussions in the previous sections.

Theoretical Background

Engos, Digital Technologies and Social Media

Environmental Non-governmental organizations (ENGOs) concentrate on environmental issues and operate at both local and international levels. These organizations are vital in raising awareness, shaping policies, and implementing solutions to various environmental problems. They are nonprofit organizations

that operate independently of government structures. ENGOs are usually funded through donations, grants, memberships, or other sources of income. They may cooperate or collaborate with governments, but are not controlled by them. ENGOs often act as watchdogs, advocates, or educators for environmental reasons (Partelow *and al.*, 2020). Some ENGOs include the World Wildlife Fund (WWF), Greenpeace, Conservation International, Nature Conservancy, and Environmental Investigation Agency. Previous research on the adoption of digital technologies at the organizational level, particularly in non-profit organizations, has employed various approaches such as social and institutional pressures (Zorn *and al.*, 2011), strategic management (Hackler and Saxton, 2007), and other approaches in the field of organizational studies (Corder, 2001).

Environmental non-governmental organizations (ENGOs) utilize digital technologies to engage with policymakers, the public, the media, and other stakeholders on environmental issues and policies. Additionally, they employ digital tools to mobilize supporters, reinforce commitment, and challenge conventional governance structures. ENGOs generally use digital tools pragmatically, extending rather than supplementing their physical activities. They tend to prefer monologic and non-interactive tools that prevail in traditional media to allow them to control their messages and brands. ENGOs often believe that physical lobbying is more effective than digital tools, because they believe that physical contact is more likely to foster trust in the public (Sieber *and al.*, 2006; Uzunoğlu and Kip, 2014).

ENGOs' Social Media Use: Influential Factors

The utilization of digital tools by ENGOs is influenced by various factors, including resources, competencies, geography, and geopolitics. These factors not only shape the context and value of digital technologies for ENGOs but may also limit or enhance their role in information governance (Nulman and Özkula, 2016). To explain the adoption and use of social networks by non-profit organizations, Nah and Saxton (2013) propose a model that integrates the key factors identified in the existing literature. This model incorporates four dimensions deemed essential for understanding the use of social media by NGOs: strategies, capacity and resource mobilization, corporate governance, and the environment.

Engos' Environmental Strategies

ENGOs can adopt various strategies to address these environmental issues. For instance, they could aim to establish relationships with governments to influence environmental policies and legislation. Additionally, ENGOs can strive to raise public awareness and educate the general public about environmental problems and their potential solutions. Such strategies would necessitate the adoption and utilization of social networks by these organizations (Hackler and Saxton, 2007). ENGOs can employ three primary strategic approaches to achieve their objectives: fundraising, lobbying, and market-based program delivery.

ENGOs that prioritize fundraising are likely to leverage technologies, such as Facebook and Twitter, to reach and engage with a broad spectrum of donors or potential donors. ENGOs have increasingly turned to social media as a means of fundraising because they allow them to mobilize a large audience (Hemmi and Crowther, 2013; Nah and Saxton, 2013). Additionally, the use of social media in lobbying may offer certain benefits to ENGOs. However, some argue that digital lobbying may not be as effective in conveying information or expertise to governments or corporations as direct contact (Sadoway, 2012; Sieber *and al.*, 2016). Instead of relying on grants, donations, or funds, ENGOs could focus on income-generating programs such as payment transactions for rendered services (Hansmann, 1980). Nah and Saxton (2013) suggest that given their fee-for-service-focused strategies, ENGOs have an incentive to reach their customers through social media.

Capacity and Resources Mobilization

Organizational resources and capacity that can be mobilized in pursuit of strategic objectives have significant implications for the adoption and utilization of social media (McCarthy and Zald, 1977). Constraints in resources and expertise may lead NGOs to be hesitant to adopt highly sophisticated and interactive tools and instead opt for mediums with limited interactive capabilities (Roose, 2012). In many emerging economies, NGOs often face financial limitations that hinder their ability to achieve their objectives, both on the ground and online (Ashmawy, 2017).

Three factors may be related to capacity: the size of an organization, the age of its website, and the extent of its website reach. The larger an organization, the more likely it is to acquire new technologies (Corder, 2001; Finn *and al.*, 2006; Zorn *and al.*, 2011). As an organization grows, it becomes more visible and may attract the attention of external stakeholders such as the state, media, and the general public (Hackler and Saxton, 2007; Luoma and Goodstein, 1999; Zhang, 2018). Many arguments suggest a positive relationship between the age and reach of a website and use of social media (Nah and Saxton, 2013). According to the diffusion of innovation theory (Rogers, 2010), an older website indicates the age of its adoption and may suggest that an organization embraced social media earlier. Additionally, a significant online presence may encourage the use of the latest and most advanced technologies, as organizations may feel pressured to maintain a competitive advantage in communication focused on social media or to adopt new emerging technologies in response to user demand.

Corporate Governance

The concept of corporate governance encompasses the processes and mechanisms implemented by organizations to coordinate their activities, allocate resources, and evaluate performance (Haris *and al.*, 2020). NGOs must establish a corporate governance system that leverages their cultural competence, political skills, and mobility assets (Davidson and Loë, 2016) to fulfill their mission and values effectively. Previous research has emphasized the significance of corporate governance as a determinant of web technology adoption by non-profit organizations (Hambrick, 1984; Saxton and Guo, 2011). As intermediaries between government, communities, and other stakeholders, NGOs can utilize social media to facilitate a more inclusive and participatory form of corporate governance (Dombrowski, 2010).

Furthermore, the size of an organization's board, an indicator of corporate governance, influences the manner in which NGOs use social media. NGOs with larger boards tend to adopt a more interactive and collaborative approach to social media, employing it to manage their diverse relationships with the public for fundraising and communication purposes and to achieve their objectives more efficiently (Nah, 2009; Olson, 2000). Additionally, larger boards are more likely to have a person in charge of information technology adoption (Howell and Higgins, 1990). The type of corporate governance structure also affects the use of social media. NGOs with more formal corporate governance arrangements, such as membership-based organizations, are less likely to engage in social networks (Guo and Musso, 2007).

Organisation's Environment

The survival of environmental non-governmental organizations (NGOs) is contingent upon resources controlled by external factors such as donations and government support (Corder, 2001). Consequently, the degree to which an NGO relies on donations determines the extent to which it devotes attention to online stakeholders, ultimately influencing its decision to employ social media in relational communication efforts. Additionally, the openness, transparency, and accountability of the government, as well as the legal and regulatory framework, play a crucial role in shaping the opportunities and challenges that NGOs face when using social media to engage with the public and the authorities (Wang, 2022).

From an economic perspective, factors such as internet access, device affordability, and economic development levels can impact the adoption and use of social media by NGOs and their stakeholders. For example, in Africa, low Internet penetration and high data costs may limit the widespread use of social media by NGOs and the public (Aday *and al.*, 2023). Cultural and demographic characteristics as well as

societal values and attitudes can also influence the demand and preference for social media by ENGOs and their stakeholders. In Malaysia, increased environmental awareness has heightened the need for information and involvement from ENGOs, prompting them to use social media to engage with the public (Saleh and Saifudin, 2017). From a technological standpoint, the availability and accessibility of social media applications, platforms, and tools as well as the level of innovation and diffusion of new technologies can impact the choice and effectiveness of social media for ENGOs (Yang and Yowei, 2019).

Social Media Content Types and Engagement

Environmental non-governmental organizations (ENGOs) can use social media to achieve various objectives. The Uses and Gratification (U&G) theory (Katz, 1974; Shao, 2009) postulates that media users seek to fulfill specific needs. Previous research has identified several gratification factors for social network use, including information seeking, convenience, entertainment, social interaction, self-expression, self-status seeking, time passing, relaxation, surveillance, knowledge about others, expression of opinions, user habits, subjective norms, and remuneration (Hossain, 2019; Gan *and al.*, 2017; Park *and al.*, 2009; Ko *and al.*, 2005; Whiting and Williams, 2013).

Upon receiving these forms of content, users will be incentivized to engage in behaviors on social media platforms, resulting in increased engagement. The concept of engagement is multifaceted with various definitions presented in the literature. One such definition posits that engagement encompasses cognitive, affective, and behavioral aspects, indicating that engagement behaviors are driven by motivational factors in line with uses and gratification theory (Gambetti *and al.*, 2012). Engagement is a social and interactive behavior that implies co-creative experiences with a specific engaging object (Brodie *and al.*, 2011; Brodie, 2013). The typology of engagement on social media comprises five distinct categories: co-creation, which involves the collaborative development of content; positive contribution, which encompasses both actively engaged and positively valenced participation; consumption and dormancy, which consists of passive engagement with either positive or negative valence; detachment, which denotes negative valence and passive engagement; and negative contribution and co-destruction, which pertain to actively engaged and negatively valenced participation (Dolan *and al.*, 2016).

This research investigates the four categories of content pertaining to the (U&G) theory, namely informative, entertaining, relational, and remunerative, and the degree and nature of engagement they elicit. Dolan *and al.* (2016) utilize the identical theoretical structure in their work.

Informative Content and Engagement

The primary objective of informative communication is to provide factual, relevant, and salient information to an intended audience. This type of communication can take various forms including social media posts, news articles, instructional videos, infographics, and podcasts. The ultimate goal of informative communication is to educate, enlighten, or inform the audience about a specific topic or issue, (Al-Jabri *and al.*, 2015; Cinelli *and al.*, 2022; Chen, *and al.*, 2002). Multiple studies have indicated that informative content tends to generate lower levels of engagement in the form of comments and likes compared to other types of content (Cvijikj and Michahelles, 2013; Lee *and al.*, 2013). However, the study conducted by Gan *and al.*, (2017) revealed that informative content has a positive impact on passive engagement behaviors such as liking and sharing on social media platforms. The authors suggested that users perceive informative content as more informative, credible, and persuasive, which in turn stimulates a sense of awareness, knowledge, or opinion, leading to increased agreement or support for such content on social media platforms. Additionally, a study conducted by Khan (2017) on YouTube found that entertainment content was the strongest predictor of liking and disliking videos.

Entertaining Content and Engagement

Entertainment refers to the enjoyable and amusing aspects of social media content that aim to captivate, delight, and inspire viewers (Eighmey, 1998). This form of communication encompasses various forms of entertainment on social platforms such as memes, jokes, narratives, games, humorous videos, and music (Hossain, 2019). Entertaining content is an essential element in promoting participation, as individuals seek enjoyment and respite in daily life (Park *and al.*, 2009). Entertainment motives could also be associated with passive content consumption, such as video viewing and reading comments, on social media platforms, such as YouTube (Khan, 2017).

Remunerative Content and Engagement

Remunerative content, which provides rewards or incentives to users, such as monetary compensation, job-related incentives, giveaways, prizes, and discounts, has been found to have mixed effects on social media engagement. Some studies, such as Dolan *and al.* (2019), have found that remunerative content positively influences active engagement behaviour on social media, such as commenting and creating content. However, users may have lower perceptions of the authenticity, credibility, or trustworthiness of the remunerative content, which may reduce their interaction or contribution to it.

Relational Content and Engagement

The desire for social benefits and the need for integration and social interaction have been identified as key motivations for using the internet (Hennig-Thurau, 2014). The motivations for using social media such as Facebook include a sense of belonging, connecting with friends and family, and participating in society, as noted by Muntinga, *and al.* (2011). On social media platforms such as YouTube, the motive for social interaction is evident in all participatory acts, including liking, disliking, commenting, and uploading (Khan, 2017). Dolan *and al.* (2019) found that relational content is more likely to result in passive engagement, such as liking and saving, rather than active engagement, such as commenting and sharing. Meanwhile, Luarn *and al.* (2015) discovered that emotional and interactive posts have a stronger impact on online engagement than informational posts do.

Methodology

Context of the Study According to the most recent data from DataReportal for 2023, social networks have emerged as mainstream media platforms, with a total of 4.48 billion user accounts worldwide, representing 57.4% of the global population. Facebook is the most widely used platform, with 2.9 billion users, followed by YouTube with 2.5 billion and WhatsApp with 2.1 billion. In Tunisia, 76.8% of the population, or 9.1 million users, are connected to social platforms. Facebook is the most popular platform in the country, with 7.5 million users, followed by Messenger with 6.9 million and Instagram with 2.9 million. TikTok has experienced the fastest growth rate, accounting for 50% of new users in the past year and reaching 1.8 million users in 2023. Snapchat and TikTok are the most widely used platforms among individuals aged 16-24, whereas Facebook, Messenger, and YouTube are more popular among those aged 25-34. Among those aged 35-44, Facebook, Messenger, and WhatsApp were more commonly used, while those aged 45-54 tend to use Facebook, Messenger, and LinkedIn. Lastly, individuals aged 55-64 years were more likely to use Facebook, Messenger, and Twitter.

Tunisia, with a population of approximately 11.8 million and a GDP of approximately \$40.3 billion, is home to an extensive network of non-governmental organizations (NGOs) and environmental NGOs (ENGOs). According to the NGO Directory of Tunisia, there are 1014 registered Tunisian NGOs that encompass a broad spectrum of sectors, including advocacy, animals, development, education, environment, faith-based, finance, food, health, people, and relief. Moreover, a substantial portion of NGOs in Tunisia are committed to addressing environmental issues, such as climate change, biodiversity, pollution, and sustainable development.

Data Collection

This study employed a qualitative approach and collected data from 20 experts working in different environmental non-governmental organizations (ENGOS) in Tunisia who had active social media accounts. The sample consisted of 12 male and 8 female participants. The characteristics of the sample are listed in Appendix 1. Semi-structured interviews were conducted between March and July 2023 to explore how ENGOS adopted and utilized social media platforms for environmental reasons. The interview guide was based on two main themes: the factors influencing the adoption of social media platforms and strategies for using them effectively.

The semi-structured interview guide consisted of two sections. The first section describes the organization's operations, and distinctive characteristics. The second section focuses on the comprehension of marketing principles in the non-profit sector and the factors that influence the implementation and utilization of social media platforms by ENGOS, such as communication objectives, target audiences, content types and formats, obstacles, and success factors. The interviews were conducted in French, the second official language in Tunisia, and lasted approximately 45 minutes each. The present study recorded the interviews with the consent of the participants and subsequently transcribed them. The results of the study have been translated into English by two experts for the purpose of this manuscript.

To analyze the data collected through the interviews, we employed a textual analysis approach utilizing NVIVO software. This involved conducting thematic analysis to identify, analyze, and interpret patterns of meaning. To do this, we combined inductive and iterative approaches to create an initial coding grid, defining nodes based on the main sections of the interview guide. We then refined the initial coding grid using an iterative approach by hierarchically organizing nodes and improving the coding grid for a more accurate interpretation of the respondents' opinions and perspectives. Additionally, to further examine the semantic content and identify the structural aspects of language, we conducted a lexical analysis of the units coded under our themes, utilizing word clouds and frequency analysis.

Using qualitative data analysis, we proceeded in accordance with the established methodology, which comprised the following steps: (1) creation of a comprehensive database, (2) dissection of the data, (3) reconstruction of the data, (4) interpretation of the data, and (5) drawing of conclusions (Durodola, 2017).

Results and Discussion

The final coding grid employed five main nodes that represented the primary themes of this study: (1) targeted groups, (2) issues addressed on social media by ENGOS, (3) communication objectives on social media, (4) social media platforms, (5) content formats, (6) content types, (7) social media adoption, and (8) types of engagement.

Targeted Groups

The majority of interviewees identified the general public, particularly youth, as the primary recipients of their communication efforts on social media. Additionally, decision-makers and biodiversity experts are vital targets for environmental non-governmental organizations (ENGOS) in Tunisia. Some have emphasized the importance of targeting decision-makers, policymakers, and donors. Other potential target groups that could be considered stakeholders were mentioned, including the media, other organizations and institutions, experts, opinion leaders, and influencers (Table1).

Table 1. Recording Units for Targeted Groups

Target groups	Verbatims
Public	<ul style="list-style-type: none"> “We believe that the public is more responsive to messages from environmental crises.”

	<ul style="list-style-type: none"> • <i>“Our objective is to ensure the highest level of visibility for our target audience, which comprises the public”.</i>
Young people	<ul style="list-style-type: none"> • <i>“The youth and the new generation are the ones who care the most”.</i> • <i>“Those who are most active and interested are the young people, aged between 18 and 25”.</i> • <i>“Young people want to learn and join organizations”.</i>
Children	<ul style="list-style-type: none"> • <i>“I communicate with children, who are still in school, and who have a strong connection to the environment, because it matters to them, and they are interested.”</i> • <i>“I know that the child will have an influence, and will affect his parents.”</i> • <i>“The child plays a significant role in influencing older generations, and you will find him with you in the future.”</i>
Environmental Cause sympathizers	<ul style="list-style-type: none"> • <i>“People who have a pre-existing interest in environmental and biodiversity issues”.</i> • <i>“Those who are drawn to the cause of biodiversity and the environment. And those who will be attracted by the problem.”</i> • <i>“Typically, these are the people who have a passion for biodiversity, who love nature, who always seek to explore distant places in Tunisia, these people can be more impacted than those who are not, for example, fond of the outdoors, who do not go out much, do not camp much, who live more or less in a closed world, work, home, evenings.”</i>
Environmental Cause indifferent	<i>“A typical individual who is unaware of the matter will not be impacted by it and will not give it any consideration. However, you can convey the message to him along with other information, so that he can become aware of the issue”.</i>
Donors and funders	<i>“I’m targeting new funders”.</i>
Experts	<i>“Following a slight decrease, experts who are not currently practicing in the field, but who can still actively participate and respond”.</i>
Decision-makers	<ul style="list-style-type: none"> • <i>“The involvement of experts and decision-makers to create some dialogue”.</i> • <i>“Maybe we need to concentrate more on decision-makers, on parliamentarians, we have to target them more, we have to include them as part of the target audiences, maybe design actions that engage them and challenge them, because they have a great responsibility in policy-making, in developing regulatory frameworks, etc.”</i>
Institutions and other NGOs	<ul style="list-style-type: none"> • <i>“National and international government institutions”.</i> • <i>“To institutions at the national and international level”.</i>
Media	<ul style="list-style-type: none"> • <i>“The media and the masses are the ones who discuss it on social media today.”</i> • <i>“The media, they focus on the buzz, because it attracts clicks on YouTube”.</i>
Opinion leaders and influencers	<ul style="list-style-type: none"> • <i>“It is the media and the masses who talk about it on social media these days.”</i> • <i>“The media, they are after the buzz, because it generates clicks on YouTube.”</i>

The word cloud in Figure 1 shows the most frequent target groups mentioned by interviewees in relation to this aspect of social media use. They include organizations, the public, decision-makers, children, and experts. Moreover, some interviewees emphasized the significance of influencer marketing and opinion leaders. Indeed, it is important to involve influencers in communication strategies, such as the Dreamer or individuals known for their environmental interests. Such individuals have the potential to attract and engage with others.

Figure 1. Target Groups Work Cloud



Issues Addressed on Social Media by Engos

The interviewees primarily focused on institutional communication, which involved promoting their organization and its activities, while also advocating for issues such as climate change, pollution, recycling, and biodiversity. They emphasized the importance of clear, concise, and easily understandable messaging in their social media communication, as demonstrated in Table 2.

Table 2. Recording Units of Issues Addressed on Social Media By Engos

Theme	Verbatims
Overview of the ENGO and its projects	<ul style="list-style-type: none"> “Explore the organization and its activities”. “The accomplishments of the organization, its future projects, the degree of partnerships that have been established.”
Biodiversity and conservation	<ul style="list-style-type: none"> “We instruct people on what to do, who to inform, how to protect it”. “The significance of biodiversity, ecosystems, etc.”
Pollution	<ul style="list-style-type: none"> “For instance, if you discard plastic here is the situation you will encounter”. “The effect of pollution, of plastic”.
Climate change	<ul style="list-style-type: none"> “The effect of lowering the temperature”. “Similar to climate change”.
Recycling	<ul style="list-style-type: none"> “We educate them about recycling”. “We clarify recycling to them”.

Communication Objectives on Social Media

All interviewees proposed the objective of raising public awareness of environmental issues. Some also stressed the importance of the visibility and notoriety of ENGOs on SM (Table 3).

Table 3: Recording Units of Communication Objectives on Social Media

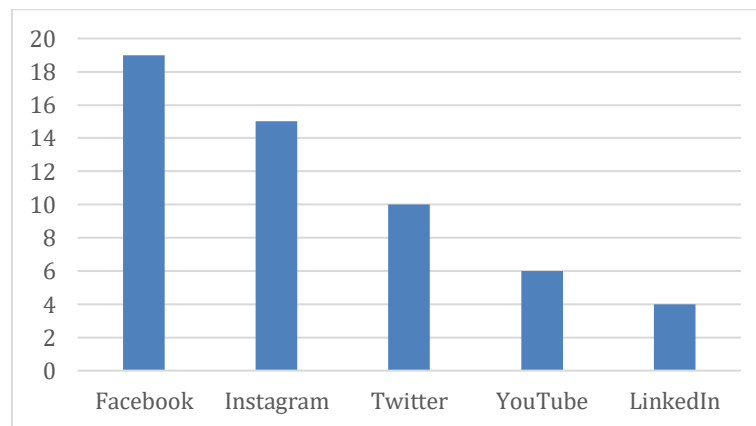
Theme	Verbatims
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raising public awareness on environmental issues	<ul style="list-style-type: none"> • “The influence on perceptions and attitudes, and the alteration in behaviour”. • “Public awareness of the significance of biodiversity, ecosystems, etc.”
Notoriety of the ENGO	<ul style="list-style-type: none"> • “When they share these capsules, they gain popularity. And they always share, and that creates a snowball effect, and then there is virality.” • “The visibility of the organization. Your work will be more known.”
Credibility of the ENGO	“It also adds some credibility with respect to governmental institutions, and especially international ones that do not have direct access to the members of the association, but they can get information on the associations through websites and social media.”
Advocacy for environmental and biodiversity conservation	<ul style="list-style-type: none"> • “Primarily focuses on conserving biodiversity and enhancing natural, historical and cultural heritage”. • “Encourage the protection of the environment”.
Social interaction	“Establish rapport with individuals”.
Financing and fundraising	“For instance, it may assist in drawing a new donor.”
Advocacy	<ul style="list-style-type: none"> • “To advocate on environmental issues”. • “And over time, we aspire to witness a policy shift”
Partnerships	“We aim to enhance partnerships, and we wish to cooperate with many local NGOs”.

Social Media Platforms

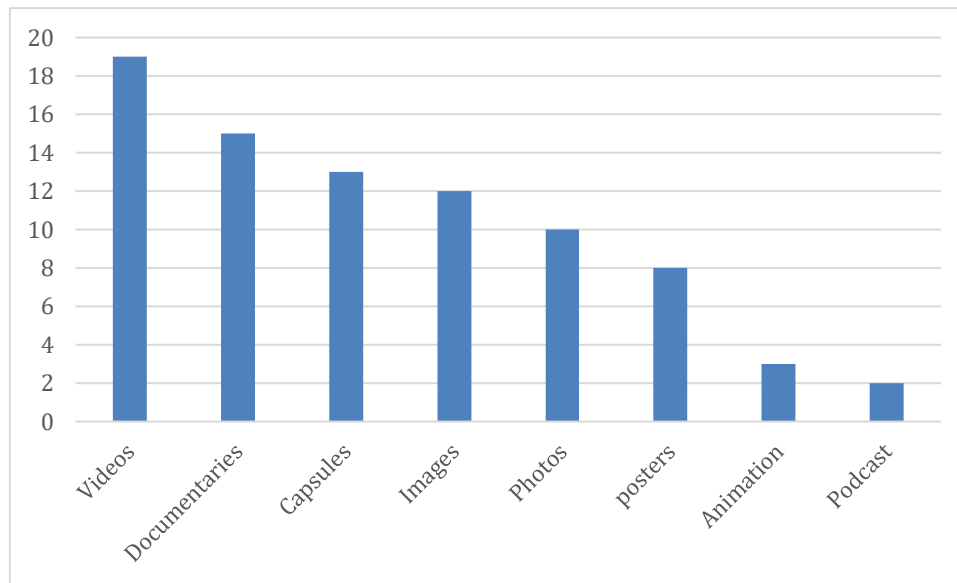
As shown in Figure 2, the surveyed individuals identified the use of five social media platforms by ENGOs in Tunisia: Facebook, Instagram, Twitter, YouTube, and LinkedIn. Among these platforms, Facebook was the most frequently mentioned, with 19 mentions. This finding is consistent with the data reported by DataReportal on the most popular social media platforms in Tunisia.

Figure 2. Used Social Media Platforms



Content Formats

The interviewees cited videos (n = 19), documentaries (n=15), and capsules (n = 13) uniformly as the primary content formats used on social media (Figure 3). Additionally, visuals comprising images (n=12), photos (n=10), and posters (n=8) were also noted as substantial contributors to the discussed content formats. Furthermore, a few interviewees mentioned alternative formats including animations (n=3), and podcasts (n=2).

Figure 3. Content Format Used on Social Media

Content Types

In our literature review, we identified four categories of content related to the (U&G) theory: informative, entertaining, relational, and remunerative. However, in our study, the respondents only mentioned information and entertainment content (Table 4). Gamification has emerged as a topic of utmost importance with regard to entertainment content. Gamification refers to the application of game design elements in non-game contexts (Smith 2012). One theory proposed by proponents of gamification is that games create a psychological state of "flow" that results from the act of playing. This state is characterized by the optimal levels of performance and satisfaction. Advocates of gamification assert that games are inherently appealing to people; therefore, messages are more likely to be effective if they are presented within the context of a game (McGonigal, 2011). Games can serve as a powerful communication tool for environmental non-governmental to deliver messages in an engaging and enjoyable manner (Freudmann and Bakamitsos, 2014).

Table 4. Recording Units for Content Types

Theme	Verbatims
Informative content	<ul style="list-style-type: none"> • <i>"The public is fascinated by environment issues as they discover things they neglect."</i> • <i>"to Share information".</i> • <i>"Scientific information"</i>
Entertaining content	<ul style="list-style-type: none"> • <i>"To enjoy yourself ... You can use the idea of gamification, where you interact with the person and they provide you with the information or you create a game or a quiz, it's not only showing a photo or a video and that's all, no."</i> • <i>"Games, something that the person can adjust as they like, where we encounter various results depending on our choices, various scenarios."</i> • <i>"Therefore, the idea of gamification should be included in the communication strategy."</i> • <i>"We can also recruit actors, we can produce a video that is both green and amusing at the same time."</i>

Social Media Adoption

In terms of strategy implementation, the majority of interviewees identified two approaches as being particularly effective: fundraising and lobbying. They emphasized the importance of these strategies in the adoption of social media platforms. With regard to fundraising, some of the interviewees highlighted the role of sponsorships, stating that "*there are sponsors who want to collaborate with ENGOs, and social media makes it easier to connect with them*". The focus on donors and fundraising has led ENGOs to utilize social media. These findings are consistent with those of Hemmi and Crowther (2013) and Nah and Saxton (2013) and others, who have noted the importance of social media in reaching fundraising and lobbying objectives. Additionally, most of the respondents stressed the importance of partnerships in achieving their mission ("*organizations can easily and quickly establish connections and partnerships with governmental and non-governmental entities through social media*").

Partnership has been presented as a form of lobbying, which, through the connections thus created, can support the advocacy of interests or exert pressure on political decision makers, as noted by the interviewees. According to our results, none of the respondents mentioned market-based program delivery as a social mission fulfilment strategy. This may be because this strategy is not prevalent in Tunisia, and, as one of the interviewees noted, its success depends heavily on the government and governmental structures.

All eight respondents indicated that Tunisian environmental (ENGOs) encounter difficulties in terms of limited resources and weak mobilization, as well as limited utilization of social media platforms in their activities. This finding is consistent with the existing literature on the topic (Corder, 2001; Finn, Maher, and Forster, 2006; Zorn, Flanagan, and Shoham, 2011), which reports that the acquisition and adoption of new technologies are influenced by organizational size and budget. However, none of the interviewees mentioned the impact of website age on social media use.

The corporate governance of ENGOs was a source of dissatisfaction for many interviewees, particularly with regard to their structure and human resources. One interviewee remarked that "*there is no investment in human resources within environmental NGOs*". These organizations often have an informal corporate governance structure that is neither sustainable nor functional, and they do not consult with their members, engage in discussions, or make decisions by consensus. These findings are consistent with those of Saxton and Guo (2011), Nah (2009), and Guo and Musso (2007), who identified these weaknesses as factors that limit the utilization of social media by ENGOs.

The participants highlighted the difficulty posed by the inconsistency of the volunteers and the lack of a designated individual responsible for communication. They underscored that the majority of the work carried out by Tunisian ENGOs is performed on a voluntary basis, with no evident professionalization of the sector. Furthermore, they pointed out that the limited size of these organizations, coupled with the absence of a dedicated social media "*champion*" impedes the effective utilization and adoption of social media platforms.

Regarding the impact of the environment on the utilization of social media by ENGOs in Tunisia, it is widely believed by the majority of interviewees that these organizations are reliant on the government, both financially and in terms of policy. While financial dependence may not always be present, organizations are heavily influenced by the country's national strategy for environmental conservation and preservation. As one interviewee stated, "*If we are discussing an ENGO that operates in the field of environmental conservation, the national strategy for nature conservation and preservation plays a crucial role.*"

The state's dependence also manifests in the administrative procedures and permits required for the activities of ENGOs ("*there is also a problem with permits. To be able to work, either it is difficult to obtain authorization, or it is impossible to obtain it*"). However, regarding funding, most of the interviewees indicated dependence on international donors ("*certainly there is support from the state... but for funding there are donors who come from abroad and who offer project opportunities*"), which encourages the use of social media to communicate with such parties and promote the organization's mission and goal, but in a limited way. These findings are consistent with previous studies on the influence of environmental factors, such as government and donors, on social

media use (Corder, 2001). However, interviewees did not mention Internet penetration (Ade, 2023), environmental awareness (Saleh and Saifudin, 2017), or the availability of social media platforms (Yang and Yowei, 2009) as potential environmental factors affecting their use of social platforms in their activities.

As shown in Figure 4, the most repeated words among the Environment factor's recording units are "funder," "fund," "environment," "funding" and "state."

Figure 4. Environment Influence Word Cloud



Types of Engagement

We evaluated the nature of the engagement elicited by our sample from the target audience. The data we accessed were limited in scope and did not allow us to identify the specific forms of engagement. However, we noted a significant degree of engagement between groups. The main inference that can be derived from our interviews is the considerable influence of informative content on engagement, as the public tended to comment, share, and reach out to environmental non-governmental organizations (ENGOS) about the environmental issues that concerned them (Table 5). These findings are in line with those of Gan, Liang, and Yu (2017).

Table 5. Recording Units for Types of Engagement Behaviour on Social Media

Level of engagement	Verbatims
Very strong	<i>"In the event that legal restrictions are transcended, such as in the case of capturing endangered species like sharks, individuals typically bring such incidents to the attention of non-governmental organizations (NGOs) by providing them with visual evidence via social media platforms."</i>
Strong	<i>"The contact information found on the page is frequently used by individuals for the purpose of seeking information and inquiries. Additionally, the numerical data associated with the page, such as the number of reactions, likes, comments, and shares, holds particular significance. Among these metrics, the number of informative and constructive comments is especially noteworthy."</i>
Medium	<i>"The number of views".</i>

Conclusion

This study examines how environmental non-governmental organizations (ENGOS) in Tunisia use social media to communicate their environmental messages and activities and how environmental factors influence their methods. The findings reveal that Tunisian ENGOS are active on social media, especially Facebook, where they engage with the public, mainly youth, on environmental issues such as climate change and biodiversity. They use short, clear messages, videos, and images to deliver content and attract attention.

The content they produce generates different levels of engagement from the audience, from views to likes, comments, shares, and even user-generated videos.

This study also explores the relationship between social media adoption and the effectiveness of ENGOs' environmental missions, such as fundraising and lobbying. The results indicate that social media adoption has a positive effect on these missions, but also depends on the availability of resources and capabilities, especially web skills and human resources. In Tunisia, most ENGOs face challenges in accessing and using information and communication technologies because of limited budgets and skills. Moreover, corporate governance issues such as small board sizes, corporate governance gaps, and member volatility hinder the adoption and use of social media by ENGOs.

This study further highlights the role of the Tunisian government and international donors in shaping the use of social media by ENGOs. This study shows that the government's financial and tactical support affects ENGO operations by imposing administrative barriers and permits, which create difficulties. However, the dependence on international donors reflects the global nature of environmental problems and the need for effective communication. The adoption of social media is influenced by financial dependence on funders, as these platforms help ENGOs reach out to potential donors, showcase their work and achievements, and increase their legitimacy.

This study also highlights the importance of influencers and partnerships in influencing the current landscape of environmental communication in the digital age. ENGOs collaborate with influencers such as celebrities and activists to amplify their messages and expand their audience, as well as share information, resources, and expertise. These partnerships enhance the credibility and authority of ENGOs and promote a sense of solidarity and cooperation among the environmental actors.

This study presents a holistic view of the complex interplay between social media adoption, environmental factors, and communication strategies used by ENGOs in Tunisia, providing useful insights for both practitioners and researchers in the field of environmental advocacy.

Managerial Implications

Our research indicates that ENGOs in Tunisia should prioritize enhancing their social media capabilities. Investing in digital literacy and technological proficiency can empower ENGOs to harness the full potential of social media platforms. It is essential for ENGOs to provide training programs that address the unique requirements of environmental communication, ensuring that their teams possess the skills required to craft engaging messages and use various content formats. Our study suggests that ENGOs must diversify their content types, particularly by integrating entertainment content into their calendars. Gamification is a promising new practice for ENGOs on social media. Financial investment in information and communication technologies is crucial for bridging the digital skill gap and effectively communicating environmental initiatives. This strategic approach to resource management is vital for navigating the evolving landscape of digital communication and for amplifying the reach and impact of environmental advocacy.

ENGOs should diversify their financial strategies, engage with individual donors, and explore innovative funding models to reduce dependence on a single funding source. This financial autonomy enables ENGOs to leverage social media for outreach, connect with a wider audience, and attract potential supporters. Simultaneously, fostering strategic partnerships with universities, media outlets, and civil society groups will enrich the content and impact of social media campaigns. These collaborations not only enhance the credibility and authority of ENGOs, but also facilitate the exchange of information and resources. ENGOs can strengthen their capacity to leverage social media for effective environmental advocacy and higher engagement within audiences by actively pursuing diverse funding avenues and building partnerships.

Future Research Directions

One potential area for future research is the development of a theoretical framework for a quantitative study that can assess the coherence of our findings and investigate the influence of factors such as strategy, environment, resources, and corporate governance on the use of social media by ENGOs. The proposed framework can also explore the relationship between the type of content and the degree of audience engagement using metrics such as likes, comments, shares, and reactions. Additionally, future studies could explore the potential of gamification and its applicability within the context of ENGOs, as many of the participants in our study expressed its importance as an effective tool for engaging the public in environmental issues. Future research could examine how ENGOs can design and implement gamified experiences on social media as well as the benefits and challenges associated with doing so. By pursuing these avenues for future research, scholars and practitioners can gain a deeper and more comprehensive understanding of the role and impact of social media in environmental advocacy.

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Appendix 1: Characteristics Of Interviewees

Code	Gender	Age	Position	Organization
I1	Male	45	Chief operating officer	ATVS (Association Tunisienne de la Vie Sauvage)
I2	Female	37	Program manager	ATVS
I3	Male	24	Mission manager	ATVS
I4	Female	47	President	A2PE
I5	Male	32	Chief operating officer	A2PE

I6	Male	19	Mission manager	A2PE
I7	Male	51	President	Exploralis
I8	Female	28	Chief operating officier	Exploralis
I9	Male	53	Coordinator	Exploralis
I10	Male	62	Chief operating officier	Programme Afrique du Nord, UICN
I11	Male	50	Coordinator	Programme Afrique du Nord, UICN
I12	Male	22	Communication Manager	AAO (Association des Amis des Oiseaux)
I13	Female	28	President	AAO
I14	Male	43	Chief operating officier	AAO
I15	Female	34	President	Association tunisienne des Randonneurs d'Akouada
I16	Female	33	Personnel médical	Association tunisienne des Randonneurs d'Akouada
I17	Male	42	Financial director	Association tunisienne des Randonneurs d'Akouada
I18	Female	47	Environmental technical advisor	EnviroFest
I19	Male	22	Program manager	EnviroFest
I20	Female	37	Chief executive officier	EnviroFest