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## **Environmental Media and Awareness of Forest Hazards in Algeria : Analysis of the Forestry Division’s Facebook Page (July 2023)**

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### **Médias environnementaux et sensibilisation aux dangers forestiers en Algérie : Analyse de la page Facebook de la Direction générale des forêts (juillet 2023)**

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#### **Introduction**

The United Nations Intergovernmental Panel on Climate Change (IPCC) report of August 2021 indicates that the Mediterranean region is a hotspot for global warming and will experience an accelerated rise in temperatures compared to the rest of the world. The area of burned forests is expected to double or triple as dry vegetation becomes fuel for fires, inevitably affecting the environment, public health, and the structure of soil and air. Forests are often referred to as the “lungs of the Earth,” as they renew and purify the air, particularly in the face of pollution from industrial and household waste. Fires also impose high economic costs on countries and individuals, who must compensate for and rebuild what has been destroyed, in addition to causing psychological trauma to those living near forests and adjacent areas.

In this context, it is important to recall that the United Nations has held a series of meetings and conferences, notably the Stockholm Meeting on the Protection of the Human Environment in 1972 and the Conference on Environment and Development in 1992. On several occasions, it has urged governments to direct their media institutions to raise awareness of environmental issues, foster a culture of environmental responsibility among citizens, and engage civil society and stakeholders in spreading this awareness to achieve sustainable development. Environmental issues are a shared responsibility for governments, non-governmental organizations, individuals, and media institutions, all of whom must work collaboratively to find appropriate solutions to preserve green spaces and ensure a sustainable future.

In Algeria, forest fires have recurred over the past three years, causing significant damage, including the destruction of vast forested areas, the loss of human and animal lives, and the destruction of homes and facilities. This situation necessitates studies to identify the main natural and human causes of these fires, in order to prevent their occurrence in the future. As previously mentioned, such fires have serious repercussions on the environment, public health, the national economy, and sustainable development.

In this regard, specialized environmental media can play a crucial role. Media outlets can lead awareness campaigns to inform the public about the causes and consequences of environmental issues. In Algeria, environmental media has gained academic recognition, with universities offering postgraduate programs in environmental communication, producing numerous PhD graduates.

Environmental media is essential for disseminating environmental awareness and fostering a culture that reduces environmental degradation. It aims to instill a sense of ownership and responsibility for the environment among citizens, encouraging them to view it as a shared asset vital for their safety and security. In Algeria, the importance of environmental media is reflected in Law 10/03 on environmental protection, which dedicates an entire chapter to this topic, particularly Articles 07, 08, and 09, emphasizing the role of environmental media in raising awareness and educating people about environmental disasters.

Considering Algeria's annual experience with forest fires, the importance of environmental media becomes evident, particularly through electronic platforms that complement the efforts of other sectors in addressing natural disasters. Algeria has demonstrated its commitment to environmental issues since the 1980s, as evidenced by national television programs such as *Land and Peasant*, which covered topics related to the environment. This paper explores the role of environmental media in addressing the forest fires that have affected Algeria, focusing on awareness campaigns conducted through the Facebook page of the General Directorate of Forestry in July 2023. It examines how these campaigns shape public opinion and encourage volunteerism for the common good. This study seeks to answer the following central question :

What were the environmental awareness topics addressed by the General Directorate of Forestry in July 2023 ?

The study aims to :

- Highlight the role of environmental media in combating forest fires in Algeria.
- Raise awareness about the importance of preserving forests as green spaces.
- Promote collective awareness to address the phenomenon of forest fires.

The significance of this study lies in raising societal awareness about the ecological and economic importance of forests. It also seeks to emphasize the role of new media in reducing and combating forest fires, which have become increasingly prevalent in Algeria in recent years.

To address the research question, we adopted a descriptive method. This approach involves observing and analyzing the role of environmental media in Algeria, examining its utilization, limitations, and the content and formats it employs, as well as the strategies it uses to combat forest fires.

## 1. Defining the Concepts of the Study

Clarifying the key concepts is essential for establishing a solid theoretical foundation for any research. This chapter examines the concept of the environment from linguistic, terminological, and conceptual perspectives, drawing on recognized sources.

### 1.1 The Concept of the Environment

1. Linguistic Definition: The Arabic term بيئة (bai'a), derived from the root "بوا" (bawa'a), signifies "placing" or "positioning," referring to the space where humans or animals settle. In classical Arabic dictionaries, it is associated with residence or habitation. For instance, *Lisan al-Arab* states: "بوائك منزلا" (bawa'tuka manzilan), meaning "I have made you a home." Similarly, *Mukhtar Al-Sihhah* defines it as a place prepared for living (Ibn Manzoor, Dt, p. 284). In contemporary usage, the term extends beyond physical space to include social, cultural, and ecological dimensions. Linguistically, the environment can be defined as "the surroundings where living organisms—humans, animals, or plants—interact to create a life context" (Al-Dah, Al-Nahwi, 2019, p. 210).
- Terminological Definition: The modern scientific definition of "environment" encompasses multiple components:
- Natural Components: Air, water, soil, and living organisms.

2. **Human-made Components : Buildings, infrastructure, and cultural artifacts designed to meet human needs** (Mohammad Mohammad Abdo Imam, 2004, p. 32).  
The International Organization for Standardization (ISO) broadens this definition to include “all external factors surrounding an organization, from local to global, including air, water, natural resources, and social systems” (Raad Hassan Al-Saroun, 2001, p. 27). This view highlights the interconnectedness of ecological and human systems.
3. **Legal Definition of the Environment :** Algerian legislation defines the environment as the abiotic and biotic natural resources, such as air, atmosphere, water, subsoil, flora, and fauna, including the genetic heritage and the interactions between these resources, as well as places, landscapes, and natural features (*Official Gazette, 2003, p. 10*). In general, the environment is understood as an entity that includes both natural and man-made resources. Striking a balance between these two components is essential for maintaining ecological equilibrium and ensuring life under favorable conditions. Consequently, it is the responsibility of every individual to contribute to its protection.
4. **Evolution of the Term in Western Thought :** The concept of the environment became significant in Western thought during the 19th century. The term “ecology,” coined by Ernst Haeckel, comes from the Greek words *oikos* (home) and *logos* (study), emphasizing the holistic study of organisms within their “home” environments. While early definitions were limited to biological contexts, modern ecology now includes socio-environmental dynamics (Rezig, 2007, p. 96).
5. **1.2 Analytical Reflection on the Concept**
6. **A comparison of the definitions reveals two primary approaches :**
7. **A naturalist perspective, focusing on physical and biological factors** (e.g., water, air, soil).
8. **A systemic perspective, integrating human activities and societal structures.**

Both perspectives converge on the idea that the environment is dynamic, evolving in response to human actions. For example, while the ISO emphasizes organizational interactions, Arabic linguistic definitions focus on habitat and settlement. These variations reflect cultural and disciplinary differences while highlighting shared concerns regarding sustainability and balance.

Understanding the environment as a dynamic system aligns with the aims of this study, which investigates how environmental conditions influence specific phenomena. It also emphasizes the need for an interdisciplinary approach that integrates linguistics, ecology, and social sciences.

### **1.2.1. Types of Fires**

- Ground Fire : Originates in grassy forests, spreading slowly through tree roots or low-lying branches. It can be controlled if access routes are available, with minimal damage (Abbas Abu Shama Abdulmajid et al., 2011, p. 23).
- Surface fire : Surface fires are caused by the remnants of woody branches, small bushes, dry grasses, weeds, thorns, and dry leaves, which are combustible materials that account for 75 % of all forest fires. The fire travels in the form of a belt that does not exceed two meters in height. The speed at which the fire spreads varies depending on factors such as wind speed, air moisture content, the type of burning material, and the nature of the terrain. Its speed increases on slopes compared to flat lands. Surface fires typically start in tree branches and short bushes, producing light grey smoke. This type of fire can be controlled using methods similar to those employed for ground fires (Abbas Abu Shama Abdul Majeed et al., 2011, p. 23).
- Crown fire : Crown fires are among the most dangerous types of wildfires. They often originate as surface fires (Abbas Abu Shama Abdulmajid et al., 2011, pp. 23–24) before the flames spread to the tops and crowns of trees when the fire’s intensity reaches a critical threshold. This progression significantly increases both the danger and the difficulty of controlling such fires, particularly in areas with tall trees. Additionally, the speed of fire spread is exacerbated by high wind speeds and dry weather conditions, further complicating access to the burning area and firefighting efforts.

### **1.2.2. Causes and Factors of Fires**

Forest fires can result from both natural and human causes, categorized as follows :

1. Deliberate Fires : Intentionally set fires, often due to motives like pyromania, more common in men (Edward Balna et al., 2016, p.17).
2. Negligent Fires : Caused by careless actions, such as unattended campfires or discarded cigarette butts, without intent to cause widespread damage.

3. Accidental Fires : Result from unforeseen events, like electrical faults or mechanical sparks, despite preventive measures.
4. Natural Fires : Triggered by natural phenomena like lightning strikes.
5. Unknown Fires : Fires where the cause remains undetermined due to lack of evidence.

These causes are influenced by factors like tree type, age, climate, and environmental

### **1.3. The Concept of Environmental Awareness**

The concept of environmental awareness is multifaceted, encompassing both a general understanding of environmental issues and a specific recognition of the individual's role in ecological preservation. It involves an internal process of knowledge and action, motivating individuals to adopt behaviors that contribute to the well-being of the environment. Below, two key perspectives on environmental awareness are outlined : its broader definition in Arabic culture and its technical interpretation in the context of ecological responsibility. These definitions highlight the importance of informed action and collective participation in safeguarding the environment.

1. Awareness : The Arabic term “Wa’i” (وعي), derived from “wi’a” (وعاء), meaning “container,” metaphorically signifies understanding or retaining information. In the Quran, it refers to hidden intentions or disbelief (Surah 84 :23, Al-Razi, 1904, p. 729). Awareness encompasses the ability to comprehend and retain knowledge, often seen as an awakening from ignorance.
2. Technical Definition : Environmental awareness is defined as an individual's recognition of the importance of ecological preservation and their role in maintaining balance through positive actions (Al-Maafa, pp. 120–121). It involves an internal process of understanding environmental issues and taking actions to preserve the environment and quality of life (Dsinger, 1996, p. 35 ; Baghdadi, 2013, pp. 907–908). This awareness emphasizes the need for individuals to recognize their responsibilities in environmental preservation, particularly in preventing issues like wildfires. The goal is to alter harmful behaviors, such as littering, and promote a collective effort in safeguarding the environment.

### **1.4. The Concept of Environmental Media**

Emerging in the 1970s, environmental media aim to address environmental issues through diverse communication channels, providing



accurate information and fostering sustainable practices (Naveen Ahmed Ghubashi, 2005, p. 257 ; A. Eldin Afif, Issa Musa Abu Sheikha, 2015, pp. 39–40). Environmental media are pivotal in raising public awareness and encouraging participation in resource conservation. Legal frameworks, such as Articles 6–9 of the environmental media system (Official Gazette, 2003, p. 10), highlight citizens' rights to access environmental information, report damages, and be protected from hazards. In Algeria, the Ministry of Environment, alongside the Ministry of Agriculture, Rural Development, and Fisheries, manages forest-related issues, reinforcing the country's focus on environmental protection since the 1980s.

### **1.5. Facebook as a Platform for Electronic Environmental Media**

Electronic environmental media represents a modern extension of traditional media, maintaining its foundational principles but primarily operating online (Marwa Issam Salah, 2015, p. 148). Digital platforms, particularly social media, facilitate the dissemination of environmental content while promoting interactivity and public engagement. Among these platforms, Facebook stands out due to its capacity for unrestricted information sharing, making it a critical tool for raising awareness and fostering environmental education. Given the widespread use of smartphones and the high level of social media activity in Algeria, environmental communicators—whether from media outlets or environmental authorities—can effectively leverage these platforms to cultivate an environmental culture. Although the impact may take time, the long-term benefits for environmental awareness are considerable.

### **1.6. Functions and Objectives of Environmental Media**

Environmental media serve several key functions aimed at promoting sustainable practices and fostering a deeper connection between humans and their environment :

- **Promoting Environmental Culture :** Environmental media seek to instill environmentally conscious behaviors, reduce harmful practices, and reinforce the relationship between humans and nature.
- **Implementing Campaigns :** Environmental media conduct campaigns through a combination of traditional and modern methods, often collaborating with schools, universities, and civil society organizations to maximize societal impact.
- **Providing Information :** By disseminating crucial environmental data, as mandated by law, environmental media help citizens form informed opinions and attitudes toward ecological preservation.

- **Global Collaboration :** International organizations, such as the United Nations, regularly update the public on pollution, natural resource violations, and preservation efforts, highlighting the role of environmental media in global awareness.
- **Encouraging Action :** Environmental media inspire both individual and collective actions in conservation, stressing personal responsibility in addressing environmental challenges (Aribat & Mazahra, 2010, p. 20).
- **Shaping Collective Memory :** Through the collection and dissemination of environmental information, media contribute to the cultural and cognitive frameworks that drive societal progress.
- **Combatting Negative Practices :** Environmental media aim to spread accurate information about forests and encourage citizens to abandon detrimental behaviors, fostering healthier interactions with natural spaces.

## **2. The Practical Aspect of the Study**

### **2.1 General Directorate of Forests in Algeria**

The General Directorate of Forests (DGF) operates as a central administrative body under the Ministry of Agriculture, Rural Development, and Fisheries, reporting directly to the Minister. Its headquarters are located at Rue Mokhtar Dodo, Ben Aknoun, Algiers. The Directorate was established by Decree No. 95-201 on July 25, 1995, as a successor to the National Forestry Agency, itself created by Decree No. 90-114 on April 4, 1990. The Directorate maintains an official website accessible at <http://www.dgf.org.dz/ar>.

The Directorate's core mission centers on the management and sustainable utilization of national forest properties and esparto grasslands (commonly referred to as halfah grass). Its responsibilities include :

- **Forest Management and Conservation :** Overseeing, protecting, and developing national forest properties and esparto grasslands.
- **Natural Resource Preservation :** Implementing measures to conserve water and soil, combat desertification, protect wildlife and plant species, and maintain natural habitats.
- **Enhancing Protected Areas :** Managing and expanding areas of ecological significance, ensuring biodiversity conservation.
- **Promoting Environmental Education :** Raising public awareness about environmental challenges and sustainable practices.

Sustainable Hunting and Fishing: Supporting ecologically responsible hunting and fishing activities to balance human needs with wildlife conservation.

The Directorate also oversees a network of specialized directorates and structures dedicated to forest resource management. Its strategic objectives align with the broader goals of sustainable development and environmental preservation, focusing on both immediate ecological challenges and long-term conservation strategies.

For more details, refer to the official website of the Ministry of Agriculture, Rural Development, and Fisheries.

Table (01) illustrates the technical details of the page.

Admin	General Division of Forests, Algeria
Activity	Services provider
Address	Chemin Doudou Mokhtar, Ben Aknoun, Algiers, Algeria
Date of Establishment	23 December 2014
Target Audience	General public
Number of Subscribers	58,000
Number of Likes	48,000
Page link	<a href="https://www.facebook.com/dgforets/?locale=ar_AR">https://www.facebook.com/dgforets/?locale=ar_AR</a>
Background	<p>The page features a white space that combines text and graphics. The text identifies the page as belonging to the General Division of Forests, a branch of the Ministry of Agriculture, with the slogan “Forests are our collective responsibility” and a green number. The graphic depicts a tree, grass, and butterflies, all of which are directly related to forests, as well as an open hand indicating everyone’s duty for the forest.</p> 

The table above provides information about the Facebook page of the General Directorate of Forests, established on December 23, 2014. This page serves as a communication platform through which the Directorate promotes its activities, aiming to raise awareness and educate the public about the dangers of forest fires on the environment, surroundings, and human lives. Targeting the general public, the page seeks to combat behaviors that threaten forests. The General Directorate of Forests uses this platform to engage with the community, providing guidance and organizing meetings with sector officials to emphasize the importance of forests as a vital natural resource for environmental health.

The page has 58,000 followers and 49,000 likes. It features a white background with the names of the supervising authority, the Ministry of Agriculture and Rural Development, and the General Directorate of Forests prominently displayed at the top. On the right side is the logo of the General Directorate of Forests, and on the left side is the logo of the Ministry of Agriculture and Rural Development. The slogan “Protecting forests is our collective responsibility” is written on the right, with the green number 1070 directly below it, followed by the name of the General Directorate of Forests in French.

The page also features an image depicting an open hand from which green grass and a central green tree emerge, surrounded by colorful butterflies, predominantly green. This image represents a healthy forest. The open hand extending toward the horizon, from which the tree emerges, symbolizes that forest protection is everyone’s responsibility. The green color of the grass and trees evokes a sense of freshness and calm, symbolizing prosperity, abundance, and growth, commonly associated with spring. The blooming flowers and flying butterflies represent the vitality and enthusiasm of youth.

The slogan “Protecting forests is our collective responsibility” reinforces the page’s communication goals, complemented by the green hotline number for reporting violations that could harm forests. The public can connect with the General Directorate of Forests via their Facebook page through this link : [https://www.facebook.com/dgforets/?locale=ar\\_AR](https://www.facebook.com/dgforets/?locale=ar_AR).

Table (02) : Categories of Publication Dates (Form Categories) for July 2023

<b>Post Subject</b>	<b>Publication Date</b>	<b>Type</b>	<b>Notes on the Content</b>
Proactive Strategy for Forest Fire Prevention During Summer	02/07/2023	Video	Intervention by the Deputy Director for Forest Protection at the General Division of Forests on Algerian Public TV during the program This Morning.
Proactive Strategy for Forest Fire Prevention During Summer	02/07/2023	Video	Intervention by the Head of the Plant and Animal Protection Department at the Bouira Forest Conservation Authority on Canal El Bilad's News Bulletin.
Forests and Forest Wealth Protection	03/07/2023	Video	Speech by the Chairman of the Agriculture and Development Committee of the Council of the Nation during a hearing session with the Minister of Agriculture.
Presentation and Discussion of the Forest Wealth Law	03/07/2023	Video	Speech by the Minister of Agriculture presenting a draft law on forest and forest resource management to the Council of the Nation's Agriculture Committee.
Condolences	04/07/2023	Image + Text	Condolences from the Director General of Forests to the Director of Thénia El-Had National Park on the passing of his father.
Condolences	07/07/2023	Image + Text	Condolences from the Director General of Forests to an administrative employee of the General Division of Forests following the passing of his brother.

Post Subject	Publication Date	Type	Notes on the Content
Statement No. (2)	10/07/2023	Image of the Statement	Announcement of preventive measures and procedures for combating forest fires.
Special Statement	10/07/2023	Image of the Statement	Warning to green space visitors about increased fire risks due to high temperatures.
Awareness Campaign Against Forest Fires	10/07/2023	Video	Educational content on citizen behaviors leading to forest fires, issued by the Ministry of Agriculture's Media Cell.
Awareness Campaign Against Forest Fires	11/07/2023	Video	Lesson for schoolchildren on the importance of forests, fire hazards, and prevention.
Congratulations	17/07/2023	Text + Image	Congratulations to successful students of the Baccalaureate exam.
Congratulations	18/07/2023	Text + Image	Greetings on the occasion of the New Islamic Year 1445.
Condolences	20/07/2023	Text + Image	Condolences from the Director General of Forests to the Head of the Beni Ounif District.
Visit of the Minister of Agriculture to Blida and Medea	22/07/2023	25 Images + Coverage	Visit objectives : presentation of the 2023 fire prevention and control plan and damage assessment of forest and agricultural losses.
Special Statement	24/07/2023	Image of the Statement	Warning to green space visitors about heightened fire risks due to high temperatures.
Director General of Forests Visit to Bejaia	24/07/2023	13 Images	Visit objectives : evaluation of local fire control efforts and acknowledgment of forest agents' contributions during the fires.
Need for Caution When Entering Forests	24/07/2023	Image + Electronic Link	Article published in the online newspaper El Nahar.

Post Subject	Publication Date	Type	Notes on the Content
Fire Extinguishing	24/07/2023	14 Images	Forest fire extinguishing operations in Jijel, Annaba, Bouira, and Medea, involving forest agents, the army, and civil society.
Fire Extinguishing	24/07/2023	11 Images	Similar to above : extinguishing operations in affected provinces.
Condolences	24/07/2023	Image + Text	Condolences from the Director General of Forests to the Algerian people following the deaths of civilians and military personnel.
Fire Extinguishing	25/07/2023	05 Images	Continued fire extinguishing operations involving local and national forces.
Fire Extinguishing	25/07/2023	21 Images	Expanded operations, including contributions by various agencies in affected provinces.
Fire Extinguishing	25/07/2023	13 Images	Documentation of firefighting efforts across multiple provinces.
Condolences	25/07/2023	Image + Text	Condolences to the father of the Forest Conservation Officer for Medea Province.
Fire Extinguishing	25/07/2023	26 Images	Operations targeting the Adkar area in Bejaia Province.

Post Subject	Publication Date	Type	Notes on the Content
Forest Fires Affecting Some Provinces	26/07/2023	Video	Interview with the Deputy Director for Forest Protection on Algerian Public TV's Algeria Direct.
Visit of the Minister of Agriculture to Tipaza	26/07/2023	13 Images + Coverage	Working visit and site inspections.
Condolences	26/07/2023	Text + Image	Condolences from the Director General of Forests following the passing of a director's brother.
Forest Fires Recently Affecting Some Provinces	26/07/2023	Audio Recording	Interview with the Director of Desertification Control and the Green Dam on Algeria International Radio.
Measures for Affected People in Provinces	29/07/2023	Video	Minister of Agriculture highlights actions for affected populations during forest fires on Algeria Direct.

This analysis explores the communication strategies employed by the agency through its social media posts, focusing on content themes, language, and textual variations. The posts primarily cover condolences, field visits by key figures such as the Minister of Agriculture, and efforts by sector officials and other state entities. These updates serve to disseminate information, reinforce operational transparency, and engage the public. The language of communication is consistently Modern Standard Arabic, ensuring accessibility and broad reach. Additionally, the analysis examines the strategic use of varied text lengths—ranging from detailed accounts of activities to brief updates on immediate events like forest fires—and the integration of visual elements. This multimodal approach reflects a conscious effort to engage diverse audiences, with a particular emphasis on environmental challenges, such as forest fires, aligning with the agency's mission to raise awareness and showcase its responsive actions. Overall, the communication strategy strikes



a balance between informative, emotionally resonant content and advocacy for environmental protection, underlining the agency's commitment to transparency and proactive engagement.

#### Observations

##### - Content Themes :

1. The most frequently posted content pertains to condolences, with a total of five posts.
2. Other posts document field visits by the Minister of Agriculture and sector officials, as well as highlight efforts by sector agents and other state entities.
3. These posts aim to disseminate information and media updates, emphasizing operational transparency and engagement.

##### - Language of Communication :

1. All posts are composed in Modern Standard Arabic, reflecting its role as the official national language and ensuring accessibility to a broad audience.

##### - Textual Variations : Posts display variations in text length :

1. Long-form texts provide comprehensive details on activities, visits, and broader initiatives.
2. Shorter texts, often paired with images, focus on immediate incidents such as forest fires and the interventions of various stakeholders, including civil protection agents, forest agents, the national army, and local civilians.

#### Insights

1. **Regularity of Posting :** The frequency and thematic focus of posts suggest a deliberate effort to keep the audience informed, with particular attention to notable events such as condolences, official visits, and emergency interventions.
2. **Focus on Environmental Media :** The content emphasizes environmental challenges, particularly forest fires, aligning with the agency's objectives to raise awareness and showcase its ongoing efforts in mitigation and response.
3. **Multimodal Communication :** The combination of textual content, ranging from detailed descriptions to concise updates, with visual elements (explored in other analyses), reflects a strategic approach to engaging diverse audiences and maximizing the impact of their message.

The analysis highlights a balanced approach in the agency’s communication strategy, combining informative updates with emotionally resonant themes such as condolences and environmental advocacy. This approach not only ensures audience engagement but also reinforces the agency’s commitment to transparency and its proactive role in addressing environmental challenges like forest fires.

**2.2. Analysis of Post Format Categories**

This section presents an analysis of the post format categories used by the General Division of Forests, focusing on the frequency and percentage of different media elements incorporated into their published content. Table 03 provides an overview of the various formats, highlighting the dominance of images in the agency’s communication strategy. Images account for the majority of posts, followed by text combined with images and videos. This multimodal approach, with its strategic use of images alongside text, plays a critical role in delivering clear, immediate messages, especially in the context of forest fires and environmental awareness campaigns. The analysis underscores the importance of visual elements in effectively conveying emotional and informative content, ensuring greater accessibility and engagement across diverse audience segments.

Table 03. Analysis of Post Format Categories and Media Element Frequency

<b>Attached Elements for the Post</b>	<b>Frequency</b>	<b>Percentage</b>
Text	2	1.75 %
Images	90	78.74 %
Video	10	8.77 %
Text and Image	11	9.64 %
Audio Recording	1	0.87 %
Total	114	110 %

The prevalence of images underscores their importance in delivering clear, immediate messages, especially in contexts such as forest fires and awareness campaigns. The strategic use of multimodal formats, particularly text combined with images, enhances the content’s accessibility and impact by guiding interpretation and clarifying intended messages. This approach aligns with modern communication practices aimed at maximizing engagement across diverse audience segments.

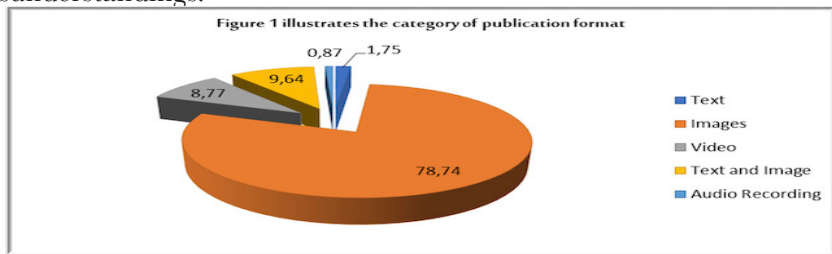
Through the table and the attached chart, it is clear that images dominate the content published by the General Division of Forests, accounting for 78.74 % of the posts. This prevalence highlights the significant role images play in delivering clear messages, particularly in the context of

forest fires. The prominence of images can be seen as a strategic choice, whether intentional or unintentional, by the communication team. Images are directed at a broad audience, leveraging their simplicity and immediacy to communicate messages more effectively than text alone.

Experts and researchers agree that images can convey news in a complete and powerful way, often carrying psychological dimensions that evoke emotions such as regret and sympathy for those affected by events like forest fires. These visual representations offer a more immediate and emotional response compared to written content, thus helping to raise awareness and galvanize public support for environmental protection. The General Division of Forests' communication team likely uses poignant imagery to not only inform but also engage the public in awareness campaigns addressing the dangers to forest resources and environmental pollution.

On a secondary level, images combined with text constitute 9.64 % of the posts. This multimodal format aims to provide a comprehensive message, combining the emotional power of images with the informative aspect of text. For audiences who may struggle with reading or understanding the language, the visual elements serve as an inclusive tool that encapsulates the intended message, making it accessible to a wider audience. However, images alone can sometimes stray from the intended message, leading to misinterpretations.

To mitigate this, the use of accompanying text or explanatory labels is crucial. These textual elements help to direct the meaning of the images, ensuring that the message remains aligned with the sender's intent. Without such clarification, the audience might interpret the images in ways that are not connected to the context of forest management. By adding text or a logo, the General Division of Forests ensures that the meaning of the image is clear, reinforcing the intended message and preventing potential misunderstandings.



The content published by the Forest Division in July 2023 mainly relies on images (78.74%) and videos (8.77%). The videos are often official interventions

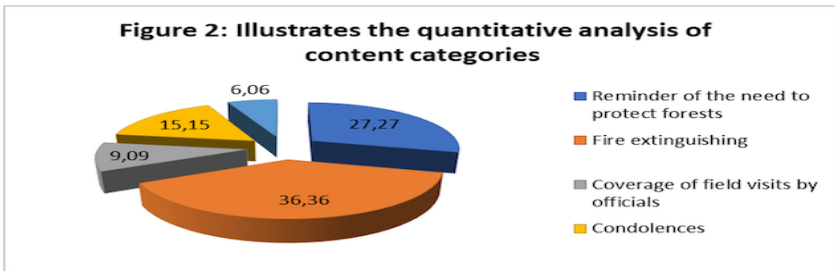
on television regarding forest fires, their impacts, and the measures taken to address them. However, criticism has been made that these interventions should have been carried out before the fire season to raise more awareness among the public about prevention.

Awareness-raising should include concrete actions such as avoiding the disposal of flammable waste in forests and involving local residents in forest protection. The videos also include awareness campaigns, one targeting the general public and another aimed at children to instill environmental protection behaviors from a young age.

Textual publications remain limited, indicating a preference for visual formats. An audio recording was mentioned, but it remains marginal. In conclusion, the Forest Division’s communication strategy heavily relies on images and videos, aiming to raise public awareness about forest fires and environmental preservation within the framework of sustainable development.

Table 4 illustrates the quantitative analysis of content categories (topics).

Campaign Topic	Frequency	Percentage
Reminder of the need to protect forests	09	27.27 %
Fire extinguishing	12	36.36 %
Coverage of field visits by officials	03	9.09 %
Condolences	05	15.15 %
Congratulations	02	6.06 %
Total	33	100 %



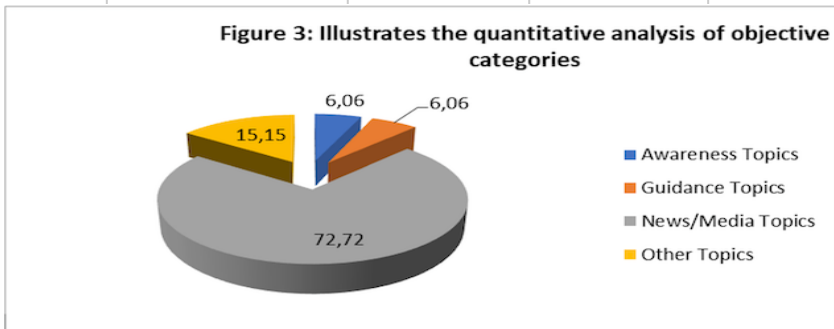
Dans l’analyse quantitative des catégories de sujets, la suppression des inIn the quantitative analysis of subject categories, the topic of fires ranked first with 36.36%, mainly due to the increase in fires in July, a particularly hot

month in Algeria. High temperatures and drought worsened the conditions conducive to fires, although some causes remain unclear, especially those related to heat, glass waste, or charcoal collection.

Reminders about forest protection ranked second with 27.27%, but this proportion is considered insufficient, especially since forest protection requires more than just awareness-raising. The Forest Division should strengthen its awareness campaigns and increase public service announcements. Condolences accounted for 15.15%, while field visits by officials represented 9.9%. Messages of congratulations, on the other hand, reached 6.06%.

Table 5 illustrates the quantitative analysis of objective categories

Campaign Topic	Frequency	Percentage
Awareness Topics	2	6.06 %
Guidance Topics	2	6.06 %
News / Media Topics	24	72.72 %
Other Topics	5	15.15 %
Total	33	100 %

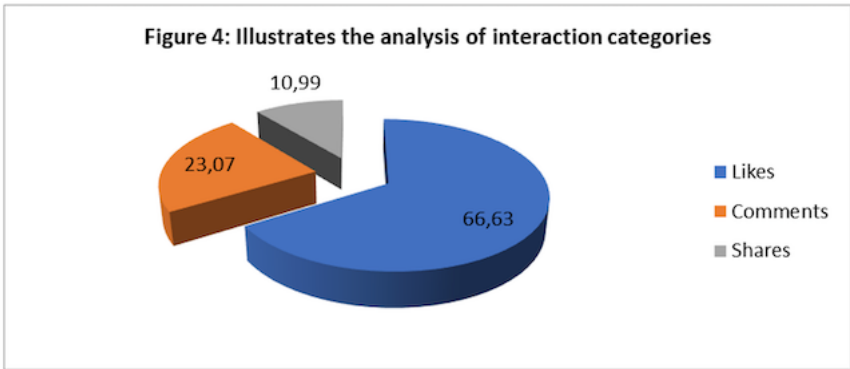


The analysis shows that news represents the dominant category with 72.15%, indicating that the Forest Division's page is primarily used to disseminate information, including official interventions and field visits. In contrast, topics related to awareness and environmental education, representing only 6.06%, are weak. This suggests a limited use of new media to raise public awareness about forest fires, possibly due to a lack of understanding by communication officials about the potential of social media

in this area. It may also be the result of the absence of an effective strategy to create more engaging content.

Table 6 illustrates the analysis of interaction categories

Interaction Categories	Frequency	Percentage
Likes	2065	66.63 %
Comments	715	23.07 %
Shares	319	10.99 %
Total	3099	100 %



From the table, it appears that followers of the page preferred to view posts and register likes, accounting for 66.63 % of interactions. Meanwhile, 23.07 % of users commented on the posts, and 10.99 % shared them. Notably, the highest number of likes was on images related to fires (277), followed by condolence posts (128, 130, 126), as illustrated in the attached image.

This pattern was also evident in the comments, where users expressed condolences and offered prayers on the condolence posts (96, 86, 88). In contrast, the statement was shared only 87 times, and other posts saw weak engagement in terms of sharing. We also observed various types of comments, including both negative and positive ones, as shown in the images below.

## Study Results

The study aimed to quantitatively and qualitatively analyze the General Division of Forests' Facebook page using counting and mathematical measurement techniques, calculating the frequencies of each category before interpreting them. The results of the study, as detailed in the following tables, highlight the key findings :

- The General Division of Forests' page was established quite simply, but it carries valuable information that directly communicates a clear message about forest preservation and the responsibility of everyone to protect them. The page also delivered a direct message about the Division's activities in July. However, it lacked messages aimed at awareness through more engaging content, whether written or visual.
- Most messages on the page focused on the activities of the Division, while there was insufficient emphasis on designing awareness campaigns to combat forest fires, especially given the surge in fires both locally and globally during July. The page featured only two brief awareness campaigns during the month.
- The page lacks environmental media in its educational and awareness-raising aspect. Social media platforms could be better utilized to create more persuasive and engaging content through service announcements or audiovisual awareness campaigns.
- The analysis shows that the General Division of Forests indeed used a mix of content types but with a clear preference for static images, which dominated the sample analyzed. Video content was used but limited to direct interventions by forest officials via media. Only two awareness campaigns were noted in the sample : one aimed at the general public and another for schoolchildren. Despite using environmental media and communication, the impact remains modest and lacks the effectiveness needed to engage the audience effectively. The page mostly followed routine activities of the institution. It was expected to leverage this digital space, teeming with diverse audience segments, to diversify and structure content to be more educational and engaging, creating a platform to address and correct harmful behaviors towards the environment.
- The analysis of content categories reveals that the General Division of Forests focused primarily on fire suppression, which took the largest share of the analysis compared to other content that should have

been directed towards awareness and education. This indicates a lack of professionalism in environmental media, which could otherwise be used to develop strategies for awareness and addressing the issue. Throughout July, the page mainly observed events but fell short in intensifying awareness efforts needed to protect forests.

- The analysis shows a lack of awareness and education on forest fires despite their recurring nature each summer. The page's inability to effectively utilize this space for awareness campaigns to foster a culture of forest and environmental protection is evident.
- Analysis revealed significant interaction with the page's content, indicating that it has a substantial following of 50,000 users, with 48,000 likes. This audience could be leveraged for awareness efforts using techniques such as snowball sampling and hashtag campaigns to promote forest protection and build a culture of environmental stewardship. However, achieving this requires diligent effort and proper utilization of new media to effectively reach and engage the broader public.

## **Conclusion**

Environmental media aims to raise awareness and promote environmental culture by creating well-structured content that addresses all segments of society to protect the environment or the habitat in which people live. The concept emerged in the 1970s with the gradual rise of industrial and technological revolutions and their environmental impacts. With the increasing calls for environmental protection, especially concerning forests, which are crucial for oxygen production and maintaining the beauty of nature, environmental media plays a vital role.

Despite its importance, the application of environmental media in Algeria remains limited. This study highlighted the modest efforts in awareness through the General Division of Forests' page, with a clear need for more robust awareness campaigns, especially given the annual forest fires.

Recommendations for the General Division of Forests include enhancing the page's content and framework to reflect effective awareness and education efforts, maintaining consistent engagement throughout the year to achieve better communication outcomes. This approach should integrate with other effective strategies to manage and prevent forest fires, utilizing environmental media to protect and preserve the environment and public resources.



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## Abstract

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This study aims to highlight the role of environmental electronic media in the fight against forest fires in Algeria by describing and analyzing a sample of posts from the Facebook page of the General Directorate of Forests from July 1 to 31, 2023.

This fight is carried out through awareness campaigns and initiatives that promote an environmental culture involving all individuals in the responsibility of protecting vegetation cover, considering trees as vital elements for ensuring safety, security, and the provision of clean air. The study also reveals the tactics used by environmental media to leverage new communication channels in processes aimed at rationalizing and correcting inappropriate behaviors that harm both the environment and human beings.

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## Keywords

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Environment, Forest Fires, Environmental Awareness, Environmental Media, General Directorate of Forests

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## مستخلص

تستهدف هذه الدراسة وصف وتحليل عينة من المنشورات على صفحة المديرية العامة للغابات عبر الفيسبوك خلال الفترة الممتدة من 1 إلى 31 يوليو 2023، من أجل تسليط الضوء على دور الإعلام البيئي الإلكتروني في محاربة حرائق الغابات في الجزائر. ويتم ذلك من خلال حملات توعية تهدف إلى نشر ثقافة بيئية تشرك الجميع في مسؤولية حماية الغطاء النباتي، مع اعتبار الشجرة عنصراً حيوياً لضمان الأمن والسلامة وتوفير الأكسجين النقي. كما تكشف الدراسة عن استراتيجيات الإعلام البيئي في استخدام وسائل الاتصال الحديثة لتصحيح السلوكيات غير المناسبة التي تضر بالبيئة والإنسان.

## كلمات مفتاحية

البيئة، حرائق الغابات، الوعي البيئي، الإعلام البيئي، المديرية العامة للغابات

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## Résumé

L'objectif de cette étude est de décrire et analyser un échantillon de publications sur la page Facebook de la Direction Générale des Forêts durant la période du 1er au 31 juillet 2023, afin de mettre en lumière le rôle des médias environnementaux électroniques dans la lutte contre les incendies de forêt en Algérie. Cette lutte s'opère par le biais de campagnes de sensibilisation visant à promouvoir une culture environnementale, impliquant chaque individu dans la responsabilité de la préservation de la couverture végétale, en considérant l'arbre comme un élément essentiel pour garantir la sécurité, la sûreté et l'accès à l'air pur. L'étude met également en évidence les stratégies des médias environnementaux pour exploiter les nouveaux canaux de communication afin de rationaliser et corriger les comportements inappropriés qui nuisent à l'environnement et à l'humanité.

## Mots-clés

Environnement, Incendies de forêt, Sensibilisation environnementale, Médias environnementaux, Direction Générale des Forêts