The influence of social media communication on climate change on public awareness in Latin America and lessons for Vietnam

Dr. Ta Van Viet
Academy of Public Administration and Governance
Dr. Chu Duc Ha
Vietnam National University Hanoi
M.A. Phan Thuy Linh
Academy of Journalism and Communication
M.A. Vu Thi Minh Tam
Halong University

Abstract: *Social media exerts a substantial influence on public perceptions of climate change by disseminating information and shaping attitudes. These platforms enable a rapid circulation of scientific research, news, and awareness-raising campaigns, which enhance public understanding of climate issues. This study examines the impact of social media on climate change awareness in Latin America and identifies lessons that may be applied to Vietnam. The findings show that higher levels of education, access to accurate scientific information, and the use of platforms such as YouTube and Twitter are important factors in improving public awareness and concern about climate change. Although demographic and national differences exist within the region, social media has broadened the space for public exchange and discussion, including exposure to conflicting viewpoints, which encourages more active public engagement in climate-related discourse. For Vietnam, the study highlights the importance of recognizing and effectively utilizing social media as a key component of climate change communication and response strategies.*

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1. Introduction

Social media is an important tool and a supplementary mode of communication for public diplomacy efforts carried out by message senders (Aichner et al., 2021). Its role in contemporary society is highly significant, not only in facilitating interpersonal connections but also in disseminating information and shaping public opinion (El-Showk, 2018; Wood, 2012). Social media exerts a strong influence on shifts in societal perceptions by fostering an interactive environment where information circulates rapidly and

widely. By enabling access to diverse information sources and viewpoints, social media can enhance understanding and deepen public awareness of social, cultural, and environmental issues (Latha et al., 2020; Kanchan & Gaidhane, 2023).

At present, social media is rapidly expanding within the broader digital communication environment and across transnational communication networks, influencing multiple dimensions of life and shaping the value systems that govern public perceptions, habits, and behaviors (Aichner et al., 2021; Wood, 2012; Chen & Wang, 2021). The unrestricted, interactive nature of social media has transformed how different audience groups receive information, depending on the fields and issues they are concerned with. These platforms are also contributing to a profound shift in communication models toward what may be described as a networked society. Consequently, a growing body of international research employs value-based frameworks to examine the impacts of social media across various domains, including studies that focus specifically on climate change.

Climate change is one of the most significant challenges confronting humanity, with far-reaching impacts on the environment, the economy, and society (Amolegbe et al., 2022; Dasgupta & Robinson, 2022). In Latin America, extreme climatic events and ecological transformations have severely affected livelihoods, public health, coastal infrastructure, and energy systems (Takahashi et al., 2023; Slovic et al., 2024). Platforms such as YouTube, Facebook, Instagram, Twitter, LinkedIn, WhatsApp, Snapchat, and Tumblr enable the rapid dissemination of scientific research, news, and awareness-raising campaigns, which enhances public understanding of issues that many individuals may not be able to access or recognize directly (Gómez-Casillas & Gómez Márquez, 2023). The influence of social media on public awareness of climate change in Latin American countries is therefore highly significant because the region is experiencing severe impacts from extreme weather events and ecological disruptions (Takahashi et al., 2023; Slovic et al., 2024). At the same time, the lessons drawn from Latin America may offer valuable guidance for Vietnam, which is also facing substantial challenges associated with climate change (Vu et al., 2019; Linh et al., 2023; Le et al., 2014), particularly regarding how social media can be utilized to enhance public awareness.

To develop a deeper understanding of these mechanisms of influence, the study employs foundational theories from behavioral science and digital communication. Three core theoretical frameworks serve as the basis for analysis: (1) The Climate Change Risk Perception Model (CCRPM), (2) The theory of the Echo Chambers, and (3) Confirmation bias. The CCRPM provides a multivariate structure for interpreting public behavior. According to this model, perceptions of climate change are not independent variables; instead, they emerge from the complex interaction among four groups of factors: cognitive, experiential, sociocultural, and demographic. Applying the CCRPM allows the study to move beyond simplistic assumptions that increased information automatically enhances awareness. Instead, it enables examination of the underlying psychological drivers that explain why one single communication message can elicit divergent reactions across population groups in Argentina, Brazil, or Mexico.

The theories of Echo Chambers, Filter Bubbles, and confirmation bias explain how social media platforms structure climate change discourse in Latin America through cognitive and informational selectivity. Algorithmic recommendation systems link users to ideologically similar content and form closed communicative environments in which climate-related narratives, including denialist views, circulate repeatedly and become reinforced, which intensifies societal polarization. At the individual level, confirmation bias shapes information processing because users seek, interpret, and accept climate-related content

that aligns with prior political beliefs or economic interests, even when such content lacks scientific validity. These mechanisms clarify how misinformation and disinformation gain legitimacy within polarized online communities and restrict exposure to diverse perspectives, which weakens evidence-based climate communication.

This study aims to synthesize existing research on the effects of social media on climate change awareness in Latin America by identifying the influence of specific platforms in enhancing awareness and promoting acceptance of climate change. This includes examining the relationship between social media use and individuals' perceptions of environmental threats, as well as their likelihood of accepting or rejecting the phenomenon. In addition, the review highlights the impact of individual characteristics, such as age, education, and culture, on climate change perceptions through social media in the Latin American region. On this basis, the study proposes that Vietnam should recognize and strategically leverage social media to respond to climate change.

2. Research contents

2.1. Public perceptions of climate change in Latin America

In Latin America, the impacts of climate change have been clearly documented across many territories and are reflected in negative shifts in climatic conditions (Ray et al., 2019). Countries in Latin America and the Caribbean have millions of residents living along hurricane pathways and in low-lying coastal areas, which makes them highly vulnerable to sea-level rise, storm surges, and coastal flooding (Flachsbart et al., 2015). Moreover, residents of informal settlements constructed on hillsides with poor drainage systems, as well as specific population groups such as female-headed households and children, face heightened risks associated with climate change (Chao, 2024). Rural poor communities in general and Indigenous groups in particular are especially vulnerable because they rely on small-scale rain-fed agriculture, natural resources, traditional knowledge systems, and cultural practices, while having limited access to infrastructure and technology. These groups also tend to have limited political influence, fewer opportunities to participate in decision-making and policy processes, and reduced capacity to benefit from governmental support for climate adaptation.

The negative impacts of climate change are expected to intensify, including serious consequences for human health, such as increases in climate-related diseases, heat stress, and food insecurity (Takahashi et al., 2023). Economic development in the region is threatened by losses in agriculture, fisheries, and tourism, which contribute to rising poverty and heightened security risks as climate change intensifies social instability and conflict. These effects extend beyond the region because Latin American and Caribbean agriculture is vital to global food security, and climate disruptions may reduce food availability worldwide, particularly in low income countries with limited adaptive capacity. Recent assessments indicate that developing countries, including those in Latin America and the Caribbean, are falling behind in implementing adaptation programs across knowledge creation, governance, and financing (Saini, 2023).

Among the most affected population groups, vulnerable communities, including women, Indigenous peoples, and rural poor households, face increasing exposure to climate risks. Limited access to information further constrains their ability to respond effectively to the negative impacts of climate change (Marrero et al., 2022). Public perceptions among vulnerable groups and the broader population reveal disparities in forecasting capacity and adaptive readiness regarding future climate risks. Existing research highlights three dominant trends: (1) a direct relationship between educational attainment and the recognition of climate change, (2) the relationship between market-oriented economic concerns and public perceptions of climate change, and (3) the influence of media

channels and demographic factors on public awareness (Spektor & Fasolin, 2023).

There is a positive relationship between national readiness to respond to climate change and the Human Development Index (HDI). Countries with populations least willing to acknowledge climate change are generally those with the lowest HDI levels in the region. In contrast, countries in the high-readiness group tend to have higher HDI scores (Ghisli et al., 2019). For example, in Honduras, a highly vulnerable country, climate change awareness shows a negative correlation with reliance on television as a primary information source, due to the limited or inaccurate climate-related coverage provided by television networks (Herrera-Serna et al., 2019). In Mexico, a country in the intermediate group, younger populations exhibit higher levels of climate change awareness than older age groups (Lara-Carrillo & Herrera-Serna, 2021). This trend is likely explained by the former's greater access to information through the internet and social media, combined with growing youth interest in environmental and sustainability issues. In Uruguay, the country's economic stagnation has led to the highest level of recognition of climate change (Fourment et al., 2020). Economic decline may heighten public concern for environmental issues because individuals perceive stronger links between economic and environmental conditions and seek sustainable solutions to improve overall well-being (Jalles, 2023).

Existing reports demonstrate that climate change has profoundly affected the social and economic landscapes of Latin American countries (Slovic et al., 2024; Gómez-Casillas & Gómez Márquez, 2023). Public perceptions are influenced by societal change and communication channels. Links between market-oriented economic concerns and climate change awareness point to tension between short term interests and long term sustainability, while cross-country differences stress the need for context-sensitive awareness and adaptation strategies (Vishwakarma et al., 2023). A clear understanding of the factors shaping public perception enables policymakers and civil society organizations to design more effective education and communication programs for specific groups and contexts. Research shows that media channels strongly influence climate change perceptions, as inadequate or inaccurate coverage by traditional media can limit awareness, while access to diverse and reliable information through the internet and social media can enhance public understanding.

2.2. Demographic differentiation in social media communication on climate change in Latin America

In research examining the role of social media in shaping public awareness of climate change in Latin America, clarifying demographic differences is essential, as variations in age, gender, educational attainment, and income can significantly influence how different groups receive and respond to climate-related information (Gómez-Casillas & Gómez Márquez, 2023). Evidence shows that Latin America is characterized by considerable cultural and social diversity, and demographic disparities affect both access to social media and attitudes toward it. These disparities are significant, given that different population groups may exhibit varying levels of concern and awareness about the impacts of climate change (Spektor & Fasolin, 2023). Understanding these demographic factors not only helps optimize communication content to enhance awareness and encourage targeted forms of action but also provides valuable lessons for Vietnam, which is similarly confronting climate-related challenges and requires effective communication strategies tailored to its local context (Hanh & Huong, 2020; Vrselja & Pžić, 2024).

Demographic differences create significant disparities in access to climate change information on social media. Age, education, income, and geographic location shape individuals' ability to use digital technologies and engage with climate-related content, while younger populations use social media more

frequently and often show higher levels of climate awareness (Demir & Yalazı, 2024). In contrast, older individuals and those with lower educational attainment often face barriers to accessing or effectively using social media, which contributes to lower climate change awareness. Socioeconomic inequality further limits internet access and device ownership among low income and rural populations, widening information gaps across social groups (Hochachka, 2024).

Research findings on climate change awareness across Latin American countries reveal considerable variation. Countries such as Paraguay, Argentina, Colombia, Mexico, and Uruguay are among those with higher levels of concern about climate change (Fourment, 2020). Mexico and Uruguay, together with Costa Rica and several other countries, show relatively high levels of climate change awareness due to policies that encouraged public participation after the 2016 Paris Agreement. Uruguay reports the highest adult awareness at 87.0%, followed by Argentina at 75.9%, and Brazil and Colombia at 73.2%, while Ecuador, the Dominican Republic, and Nicaragua record the lowest levels. Country-level analysis indicates that awareness is significantly higher in Argentina, Brazil, Colombia, Mexico, Paraguay, and Uruguay than in Costa Rica (Gómez-Casillas & Gómez Márquez, 2023). These disparities may show differences in educational attainment, access to information, and public interest in climate-related issues.

Research shows that older adults, especially those over 60, often display deeper environmental awareness due to long-term exposure to environmental degradation linked to resource extraction. In contrast, individuals in higher socioeconomic groups tend to show lower concern about climate change, partly because acknowledgment conflicts with carbon-intensive lifestyles, while more vulnerable and lower-income groups report higher levels of concern. Higher educational attainment is also consistently associated with greater climate change awareness, which highlights education and socioeconomic status as key predictors shaping diverse public perceptions (Newsome et al., 2023; Ramadani et al., 2023).

Increased exposure to climate-related content on social media has significantly increased climate change awareness in the region. In Latin America, YouTube has demonstrated a strong and positive influence on shaping pro-environmental attitudes (Duran-Becerra & Hillyer, 2020). Content on YouTube plays an important role in disseminating scientific knowledge about climate change, thereby enhancing public understanding and interest in the topic. This also suggests that growing climate skepticism has not produced substantial effects among the general Latin American population, possibly because reliable scientific information is being communicated through such platforms. On Twitter, climate communicators tend to be more active and influential than climate change deniers (Effrosynidis & Sylaios, 2022). The platform enables rapid dissemination of updated information and allows scientists, environmental activists, and non-governmental organizations to share research, data, and awareness-raising campaigns. The strong presence of climate communicators on Twitter helps counter misinformation and shapes public opinion in support of climate action (Cody et al., 2015). WhatsApp is particularly effective in promoting climate change awareness in Latin America. Although primarily designed as a private messaging application, WhatsApp also facilitates the circulation of content from websites and other information sources. This enables climate-related information to be shared within personal networks and small communities, strengthening trust and interpersonal engagement. The personalized nature and accessibility of WhatsApp make it a highly effective channel for diffusing climate information (Vrselja & Pžić, 2024). Individual-level engagement across multiple platforms also demonstrates that websites and social

media applications, although functioning independently, are interconnected through users' online behavior.

2.3. Current state of social media communication on climate change and its Influence on public awareness in Latin America

Public concern about climate change is shaped by factors such as extreme weather events, access to accurate scientific information, media coverage, elite cues, and the influence of social movements or counter movements. Direct experience of climate related disasters increases awareness and can motivate individual and collective action, while education and clear scientific communication improve public understanding. Media outlets further influence perceptions, as accurate and consistent coverage raises awareness and engagement, whereas inadequate reporting or misinformation can reduce understanding and concern. Political, economic, scientific, and cultural leaders influence public attitudes through their signals on climate change. Public acknowledgment and commitment to action encourage engagement and support for mitigation and adaptation, while denial or minimization reduces concern and slows progress. Social movements and nongovernmental organizations also shape awareness and action, as environmental movements increase pressure on policymakers, whereas counter movements can weaken awareness and intensify polarization (Salem et al., 2022).

Social media has emerged as a powerful driver of public concern about environmental issues by enabling campaigns that raise awareness, shift attitudes, and mobilize collective action. At the same time, it provides space for counter movements to spread misinformation and climate skepticism, which can weaken public understanding and behavior. A clear understanding of these dynamics is essential for effective communication strategies that strengthen environmental movements, counter opposing narratives, and support collective action toward climate adaptation and net zero goals (Venghaus et al., 2022).

Specifically, social media platforms allow users to access information rapidly and update continuously, often tailored to their personal preferences through algorithmic recommendations. However, whereas information in the past was typically disseminated through established formats such as news bulletins produced and verified by reliable professional journalistic institutions, content on social media today is not necessarily created or fact-checked according to traditional journalistic standards. This shift has contributed to the proliferation of fake news and misinformation about climate change. The lack of verification and the ease with which information spreads on social media can lead to misunderstandings, skepticism, and diminished public trust in climate science. In addition, social media platforms actively encourage self-expression and user-generated content. While traditional media provide limited opportunities for audience participation within constrained communication spaces, social media facilitates a new model in which users operate as content producers. The social dimension of these platforms also plays a crucial role in shaping public opinion through peer pressure and other social dynamics. Users form networks of friends or followers where they share content and exchange viewpoints. Such interactions can create echo chambers, where similar perspectives are reinforced, and opposing views are excluded. Algorithmic systems further intensify this process by displaying content based on users' interaction histories and preferences, potentially resulting in limited and biased exposure to information. This dynamic increases the risk of encountering fake news or misinformation about climate change and reinforces existing beliefs rather than encouraging engagement with diverse perspectives.

Not only individuals but also groups, nongovernmental organizations, companies, and other stakeholders use social media to advocate, educate, and influence public policy on climate change. These actors can organize communication campaigns, mobilize collective

action, and promote change by engaging online communities. However, climate change denial groups likewise use social media to disseminate misinformation, foster skepticism, and impede efforts to address climate challenges (Venghaus et al., 2022). Understanding these dynamics is essential for assessing the role of social media in shaping public opinion, contributing to polarization, and reinforcing the rejection of climate science. Moreover, the frequency and duration of social media use are important variables in research, yet they also pose challenges for data reliability. Future studies should therefore employ more precise measurement methods and account for the complex factors inherent to the social media environment to draw more accurate conclusions about the impact of social media on climate change awareness.

In Latin America, research on the differentiated effectiveness of social media in promoting climate change awareness indicates that YouTube has the most substantial impact, as it provides rich, accessible video contents that help the public understand complex climate-related issues (Gómez-Casillas & Gómez Márquez, 2023; Duran-Becerra & Hillyer, 2020). Numerous studies show that audiences frequently comment on and respond to scientific claims about climate change on YouTube, creating an interactive environment between viewers and content creators. Such interaction not only influences public perceptions and behaviors regarding specific climate issues but also shapes the emotional responses and expectations associated with this form of social media. Public engagement through user comments on similar views has been found to intensify perceptual polarization. Echo chambers occur when users primarily interact with others who share similar perspectives, thereby reinforcing preexisting beliefs and limiting exposure to opposing viewpoints. Although contradictory information about climate change constitutes a substantial portion of content on Twitter, the platform still plays a meaningful role in amplifying messages and shaping climate change awareness (Cody et al., 2015). Facebook and LinkedIn exhibit positive effects on awareness; however, these effects are not statistically significant. This may be due to the dispersed nature of content on these platforms, which is often not focused on environmental issues, or to users engaging with them for purposes other than seeking information about climate change.

In contrast, Snapchat and Tumblr exhibit adverse effects, as users on these platforms tend to show limited interest in climate-related topics, or because the modes of information delivery are neither conducive to enhancing climate change awareness nor statistically significant in terms of effect. These findings indicate that not all social media platforms exert the same influence on public perceptions of climate change. Understanding the dual roles of these platforms is essential to developing effective communication strategies that enhance awareness, encourage constructive discussion, and counter climate change misinformation. At the same time, embracing diversity in viewpoints and promoting open dialogue can contribute to a more informed public sphere and support broader efforts to address climate change.

3. Recommendations for Vietnam

Drawing on in-depth analysis of the Latin American context, it is possible to derive an overarching observation: social media in the region exhibits a distinctly dual character and is powerfully shaped by platform algorithms. *On the one hand,* social media serves as an effective tool for disseminating scientific knowledge and raising awareness, particularly on video platforms such as YouTube, where visual content helps the public understand complex issues. *On the other hand,* the operational mechanisms of social media also produce echo chambers and polarization, allowing climate change denial to persist and circulate within specific user groups. This context shares several similarities with Vietnam, a country facing severe challenges from natural disasters and climate change, and that also has a large and

diverse social media user community. Recognizing both the opportunities offered by the hyperconnectivity of social media and the challenges posed by misinformation and informational polarization, as observed in Latin America, provides an important empirical foundation. Based on this, the study proposes several considerations for Vietnam to fully leverage the advantages of social media within its national climate change response strategy.

3.1. Utilizing social media as a key communication channel in responding to natural disasters and climate change

Recently, the historic Typhoon Yagi made landfall, directly affecting the coastal and inland areas of Northern and North Central Vietnam. The preparedness and response efforts before, during, and after Typhoon No. 3 have provided important lessons for ministries, provincial authorities, and relevant agencies. Among these is a significant lesson regarding communication, particularly the role of public messaging in raising community awareness about adaptive capacity, disseminating information on adaptation measures, and minimizing the impacts of natural disasters. Immediately after the Prime Minister issued Official Telegram No. 86/CD-TTg on 3 September 2024, addressed to provincial Party Committees, People's Committees, and leaders of central ministries and agencies on the implementation of response measures for Typhoon No. 3, the Ministry of Information and Communications issued Official Telegram No. 05/CD-BTTTT on 5 September 2024. This directive was sent to provincial Departments of Information and Communications, units under the ministry, and postal and telecommunications enterprises to ensure a proactive response to the typhoon. The Ministry of Information and Communications (now the Ministry of Culture, Tourism and Sports) outlined specific requirements for each unit in the information sector, such as the Vietnam Telecommunications Authority, the Central Post Office, postal and telecommunications enterprises, and the Vietnam Posts and Telecommunications Group. It also provided guidance for mass communication agencies, including the Authority of Press, the Authority of Broadcasting, Television and Electronic Information, and the provincial Departments of Information and Communications. Following these directives, press and broadcasting agencies fulfilled their public communication roles effectively by increasing airtime, providing timely updates on storm developments, heavy rainfall, and flooding, and disseminating information on response measures. Although no quantitative study has yet evaluated the effectiveness of mass media communication during the historic Typhoon Yagi, the role and impact of social media platforms in information dissemination have been substantial.

Within the scope of this study, the authors have identified the influence of social media on shifts in climate change awareness in Latin America and distilled key insights applicable to the Vietnamese context, particularly regarding the needs and reception patterns of Vietnamese social media users. From a communication perspective, it is undeniable that, in legal terms, major social media platforms such as Facebook, YouTube, and Twitter operate as cross-border networks and do not have their host servers in Vietnam. This reality poses challenges for developing platform-specific regulatory mechanisms and communication policies. However, it is essential to recognize and utilize social media as one of the key communication channels in efforts to respond to natural disasters and climate change. In practice, social media has become an integral component of contemporary journalistic ecosystems. Moreover, its effectiveness is evident: posts calling for rescue from residents in hazardous areas, appeals for relief supplies, alerts about landslides and flash floods, and content refuting fake news and misinformation during flood emergencies consistently receive high engagement from online communities. Such engagement, expressed through comments and shares, reflects a collective spirit of solidarity in overcoming storms and floods. This creates a ripple effect that amplifies the reach of information and encourages coordinated

community action.

Therefore, in the coming period, the Ministry of Culture, Sports and Tourism, together with provincial Departments of Science and Technology, should place greater emphasis on examining the potential of social media in climate change communication and treat it as one of the key channels for raising public awareness. Proposed actions include the following: coordinating the implementation of social media communication initiatives with press and broadcasting agencies through platform-specific communication components, and working with the Ministry of Agriculture and Environment to develop an official social media communication ecosystem across major social networking platforms.

3.2. Developing a social media editor system to monitor and respond to climate change discourse

According to the 2016 Press Law, press is defined as information products on events and issues in social life that is expressed through words, images, and sounds, created and published periodically, and disseminated to the public through print media, audio media, visual media, and electronic media (National Assembly, 2016). From an informational value perspective, citizen journalism content exerts some influence within the specific audience communities it reaches. Therefore, expanding the 2016 Press Law to include a category for social media-based journalism is necessary to keep pace with contemporary communication practices and the principle that "where the public is, there is press." Drawing on the participation theory, social media platforms have transformed users from passive audiences into active content creators. Evidence from Latin America shows that platforms such as YouTube and Twitter function not only as entertainment channels but also as primary news sources for various audience groups. In certain natural disaster cases, citizen journalists have provided updates more quickly than traditional news organizations. For this reason, revising the Press Law to encompass this emerging form of press is not merely an administrative requirement but a strategic and adaptive step toward aligning Vietnam's media governance framework with the realities of a new information ecosystem.

The study proposes establishing a position of social media editor to manage social interactions and monitor online discourse, including climate change-related communication. Although this role has begun to emerge in several editorial offices, it has not yet been formally recognized or systematically institutionalized. In the current context of information proliferation and growing challenges associated with communication security, social media editors constitute an essential professional group. They act as "information gatekeepers" and "information balancers," particularly for content related to the impacts of climate change disseminated via social media platforms. The definition and responsibilities of the social media editor position can be structured using the familiar 5W1H model, a problem-solving and analytical framework based on six guiding questions: What, Why, When, Where, Who, and How.

(1) Who are they? Social media editors are responsible for managing social interactions and guiding public opinion. Their role includes assessing the degree of public engagement with climate-related statements, monitoring comment patterns, and evaluating how information circulates across platforms. This enables them to determine the effectiveness of social media communication and adjust communication strategies accordingly.

(2) When do they operate? Social media editors serve as information gatekeepers, facilitating online public engagement. They work to ensure that climate-related communication is aligned with audience needs, gather feedback, and strengthen the credibility and influence of the social media platforms they manage.

(3) Where do they work? Social media editors operate across all social networking platforms in an online environment without spatial or geographical constraints.

(4) What do they do? Social media editors play a critical role in identifying, collecting, and filtering information circulated on social media regarding topics such as climate change. Their responsibilities include monitoring ongoing discourse, analyzing information trends and public reactions, and managing misinformation or disinformation, especially climate-related denial narratives.

(5) How do they work? Social media editors combine technological tools with information-analysis skills, using social media monitoring systems to track discussions concerning climate change and identify denialist discourse for targeted response. They collaborate with journalists and policymakers to produce educational content, refute misleading narratives, and promote accurate climate information. In addition, they must maintain regular public interaction, respond to inquiries, and foster engagement to increase awareness and community interest in climate change.

3.3. Keeping pace with emerging trends to establish a mechanism that integrates social media communication and traditional journalism

Establishing an integrated mechanism between social media communication and traditional journalism to enhance the effectiveness of climate change communication for the public can be approached from four key dimensions as follows:

(1) Creating a symbiotic relationship between the speed of social media and the credibility of traditional journalism. Social media offers a distinct advantage for rapid information dissemination, especially during emergencies or significant events. Traditional journalism, as a trusted source of verified information, can leverage this speed by using social media to capture initial public attention and subsequently provide in-depth analytical reporting. This combination ensures that the public not only receives timely updates but also has access to accurate, well-substantiated information.

(2) Using social media as a distribution channel for journalistic content. Given the diversity of social media platforms, news organizations can reach multiple audience segments more effectively. Adapting content delivery to each platform's characteristics is also a critical strategy.

(3) Leveraging social media trends to deliver journalistic content. Trends can be exploited to better tailor content to public interests. Grasping online discussion trends enables the press to access the topics they are interested in, and thereby present information in ways that align with users' evolving media consumption patterns.

(4) Guiding public perceptions and behavior through consistent messaging. Consistency in messaging helps ensure that the public not only develops a clearer understanding of climate-related issues but also feels motivated to take concrete actions in response to these challenges.

4. Conclusion

The relationship between socio-economic conditions and climate awareness in studies conducted in Latin America demonstrates that socio-economic and demographic factors play a critical role in shaping perceptions of climate change. Countries with higher Human Development Index (HDI) scores and higher levels of educational attainment tend to be better prepared for climate action. Notably, older populations and individuals in the middle and lower socio-economic classes show greater awareness of environmental threats than younger groups and upper-class populations. The differentiated effects of social media across demographic groups are also evident, as social media has expanded the discursive space in which public opinion on climate change is formed and negotiated in Latin America. Using social media as a strategic communication tool can enhance public engagement, generate positive social pressure, and support public policies related to climate change.

For Vietnam, the lessons from Latin America highlight the necessity of recognizing

and utilizing social media as an important communication tool in national climate change response efforts. Coordination among regulatory agencies, the press, and social media platforms is essential for strengthening public awareness and adaptive capacity. Agencies such as the Ministry of Culture, Sports, and Tourism should consider developing and deploying dedicated social media communication strategies, working in partnership with major social networking platforms and news organizations to build an official, reliable social media ecosystem. In addition, incorporating social media-based journalism into the legal framework and institutionalizing the position of social media editor are necessary steps. Social media editors would play a vital role in monitoring and guiding climate-related information flows, and in preventing the spread of climate denial discourse. They would ensure that climate information is disseminated accurately and promptly, in ways that align with public needs, while also fostering community engagement and action for environmental protection. Moreover, press regulatory bodies and news organizations must remain responsive to emerging trends by establishing mechanisms that integrate social media communication with traditional journalism in order to enhance the overall effectiveness of public communication on climate change.

References:

1. Aichner, T., Grünfelder, M., Maurer, O., & Jegeni, D. (2021). *Twenty-five years of social media: A review of social media applications & definitions from 1994 to 2019.* Cyberpsychology, Behavior and Social Networking 24(4): 215-222.

2. Amolegbe, S.M., Lopez, A.R., Velasco, M.L., Carlin, D.J., Heacock, M.L., Henry, H.F., Trottier, B.A., & Suk, W.A. (2022). *Adapting to climate change: Leveraging systems-focused multidisciplinary research to promote resilience.* International Journal of Environmental Research and Public Health 19: 1467419.

3. Chao, K. (2024). *Family farming in climate change: Strategies for resilient & sustainable food systems.* Heliyon 10(7): e28599.

4. Chen, J. & Wang, Y. (2021). *Social media use for health purposes: Systematic review.* Journal of Medical Internet Research 23(5): e17917.

5. Cody, E. M., Reagan, A. J., Mitchell, L., Dodds, P. S., & Danforth, C. M. (2015). *Climate change sentiment on Twitter: An unsolicited public opinion poll.* PLoS One 10(8): e0136092.

6. Dasgupta, S. & Robinson, E.J.Z. (2022). *Attributing changes in food insecurity to a changing climate.* Scientific Reports 12(1): 4709.

7. Demir, R., Yalazı, R.Ö., & Dinç, A. (2024). *The relationship between women's climate change awareness and concerns about climate change in Turkiye.* Public Health Nursing 41(2): 215-220.

8. Duran-Becerra, B. & Hillyer, G.C. (2020). *Climate change on YouTube: A potential platform for youth learning.* Health Promotion Perspectives 10(3): 282-286.

9. Effrosynidis, D. & Sylaios, G. (2022). *Exploring climate change on Twitter using seven aspects: Stance, sentiment, aggressiveness, temperature, gender, topics, and disasters.* PloS One 17(9): e0274213.

10. El-Showk, S. (2018). *Saving the digital world. Nature 563(7733): S144-S146.*

11. Flachsbarth, I., Willaarts, B., Xie, H., Pitois, G., Mueller, N. D., Ringler, C., & Garrido, A. (2015). *The role of Latin America's land and water resources for global food security: Environmental trade-offs of future food production pathways.* PLoS One 10(1): e0116733.

12. Fourment, M., Ferrer, M., Barbeau, G., & Quénol, H. (2020). *Local perceptions, vulnerability and adaptive responses to climate change and variability in a winegrowing region in Uruguay.* Environmental Management 66(4): 590-599.

13. Ghislandi, S., Sanderson, W.C., & Scherbov, S. (2019). *A simple measure of human development: The human life indicator.* Population and Development Review 45(1): 219-233.

14. Gómez-Casillas, A. & V. Gómez Márquez (2023). *The effect of social network sites usage in climate change awareness in Latin America.* Population and Environment 45(2): 7.

15. Herrera-Serna, B. Y., Lara-Carrillo, E., Toral-Rizo, V. H., Cristina do Amaral, R., & Aguilera-Eguía, R. A. (2019). *Relationship between the human development index & its components with oral cancer in Latin America.* Journal of Epidemiology and Global Health 9(4): 223-232.

16. Hochachka, G. (2024). *When concern is not enough: Overcoming the climate awareness-action gap.* Ambio 53(8): 1182-1202.

17. Jalles, J.T. (2023). *Financial crises & climate change.* Comparative Economic Studies 1-25.

18. Kanchan, S. & A. Gaidhane (2023). *Social media role & its impact on public health: A narrative review.* Cureus 15(1): e33737.

19. Latha, K., Meena, K. S., Pravitha, M. R., Dasgupta, M., & Chaturvedi, S. K. (2020). *Effective use of social media platforms for promotion of mental health awareness.* Journal of Education and Health Promotion 9: 124.

20. Lara-Carrillo, E., Herrera-Serna, B. Y., Conzuelo-Rodríguez, G., do Amaral, R. C., Aguilera-Eguía, R. A., & Toral-Rizo, V. H. (2021). *Effect of human development index and other socioeconomic factors on mortality-to-incidence ratio of lips and oral cavity cancer in Mexican states: An ecological study.* BMJ Open 11(6), e042376.

21. Le Dang, H., Li, E., Nuberg, I., & Bruwer, J. (2014). *Farmers' perceived risks of climate change & influencing factors: A study in the Mekong Delta, Vietnam.* Environmental Management 54(2): 331-45.

22. Marrero, A., Anderson, E., de la Vega, C., Beltran, V., Haneuse, S., Golden, C., & Mattei, J. (2022). *An integrated assessment of environmental sustainability & nutrient availability of food consumption patterns in Latin America & the Caribbean.* The American Journal of Clinical Nutrition 116(5): 1265-1277.

23. Newsome, D., K.B. Newsome, & S.A. Miller (2023). *Teaching, learning, & climate change: Anticipated impacts & mitigation strategies for educators.* Behavior and Social Issues 32(2), 494-516.

24. Ramadani, L., S. Khanal, & M. Boeckmann (2023). *Climate change & health in school-based education: A scoping review protocol.* PLoS One 18(3): e0282431.

25. Ray, D. K., West, P. C., Clark, M., Gerber, J. S., Prishchepov, A. V., & Chatterjee, S. (2019). *Climate change has likely already affected global food production.* PloS One 14(5): e0217148.

26. National Assembly. (2016). *Press Law*.

27. Saini, E. (2023). *Leveraging investment in agricultural science, technology, & innovation in Latin America & the Caribbean.* Science 382(6669): eadl0654.

28. Salem, M. R., Hegazy, N., Thabet Mohammed, A. A., Mahrous Hassan, E., Saad Abdou, M. M., & Zein, M. M. (2022). *Climate change-related knowledge & attitudes among a sample of the general population in Egypt.* Frontiers in Public Health 10: 1047301.

29. Slovic, A. D., Indvik, K., Martins, L. S., Kephart, J. L., Swanson, S., Quistberg, D. A., & Roux, A. V. D. (2024). *Climate hazards in Latin American cities: Underst&ing the role of the social & built environments & barriers to adaptation action.* Climate Risk Management 45: 100625.

30. Spektor, M., Fasolin, G. N., & Camargo, J. (2023). *Climate change beliefs and their correlates in Latin America.* Nature Communications 14(1), 7241.

31. Takahashi, B., Posse, C. G., Sergeeva, M., Salas, M. F., Wojczynski, S., Hartinger, S., & Yglesias-González, M. (2023). *Climate change & public health in South America: A scoping review of governance & public engagement research.* The Lancet Regional Health-Americas 26: 100603.

32. Tuyet Hanh, T.T., Huong, L.T.T., Huong, N.T.L., Linh, T.N.Q., Quyen, N.H., Nhung, N.T.T., Ebi, K., Cuong, N.D., Van Nhu, H., Kien, T.M., Hales, S., Cuong, D.M., Tho, N.T.T., Toan, L.Q., Bich, N.N., & Van Minh, H. (2018). *Vietnam climate change and health vulnerability and adaptation assessment.* Environmental Health Insights 14: 1178630220924658.

33. Venghaus, S., M. Henseleit, & M. Belka (2022). *The impact of climate change awareness on behavioral changes in Germany: Changing minds or changing behavior?* Energy, Sustainability & Society 12(1): 8.

34. Vishwakarma, P. K., Vaghmare, S., Banerjee, S., Vishwakarma, A. P., Waghmare, A., Agrawal, A., & Sharma, M. (2023). *Association of public awareness & knowledge of climatic change with sociodemographic factors.* Cureus 15(10): e47381.

35. Vrselja, I., Pandžić, M., Rihtarić, M. L., & Ojala, M. (2024). *Media exposure to climate change information and pro-environmental behavior: The role of climate change risk judgment.* BMC Psychology 12(1), 262.

36. Vu, D.T., T. Yamada, & H. Ishidaira (2018). *Assessing the impact of sea level rise due to climate change on seawater intrusion in Mekong Delta, Vietnam.* Water Science and Technology 77(5-6): 1632-1639.

37. Woods, H. (2012). *A look at history, health policy & social media.* Kai Tiaki: Nursing New Zealand 18(11): 25.